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Announcement

THE activities of the Museum have increased to such an extent since its opening in November, 1922, that it has been found impossible to keep its friends adequately informed of the operations in the various fields to which its work is devoted, or of the more important accessions to its rapidly growing collections. Therefore, in order that it may not be necessary to await the publication of the results of field expeditions, often requiring considerable time, and to give to those interested fairly early information respecting the Museum and its operations, especially in the matter of the accession of collections, these Indian Notes will be issued as occasion seems to require. The series of Indian Notes and Monographs, publication of which was commenced in 1919 through the generosity of Archer M. Huntington, Esq., has not ceased, although few volumes or parts of volumes have ap-

peared in recent months. It is expected that several numbers of this series will be issued in the coming spring or early summer, embodying the results of studies in several anthropological fields by members of the Museum or by its collaborators. These volumes, together with the magazine of which this is the initial number, will, it is hoped, keep the members of the Museum, as well as others who have been helpful in so many ways, informed of the progress of the Museum in the promotion of its aims and objects.

GEORGE G. HEYE,

Director

Explorations in the Ozark Region



ESULTS of unusual interest were obtained in 1922 and 1923 by the Museum expedition to the Ozark Mountain region of northwestern Arkansas and the adjoining portion of southwestern Missouri.

Here were found a series of limestone cliffs which in many places overhang in such a way as to form rockshelters, affording almost complete protection from the weather. Some indeed were absolutely dry and had evidently remained in this condition for many centuries, for digging in the deposits of dust that formed their floors revealed baskets, pieces of rude cloth, implements of wood, of stone, and of bone, left there by some unknown ancient tribe of Indians before the coming of the whites—probably centuries before Columbus made his memorable voyage. We have named these people, for convenience, the Ozark Bluffdwellers.

Rockshelters showing traces of ancient Indian occupancy are fairly abundant in many parts of the country, but these, as a rule, are damp, and yield only relics made of lasting materials, such as flint arrowheads, bone awls, and pottery—only a small part of the ancient dwellers' possessions. For this reason the discoveries in Ozark dry rockshelters

are most important, for they have preserved for us examples of practically every implement or utensil the inhabitants owned or used, and have given us an unusually complete picture of their life.

Cave finds of this kind might be expected in the desert or semi-desert parts of Utah or Arizona; but they are certainly remarkable in such a rainy, humid country as Arkansas. Imbedded in the mass of dust, ashes, and grass left by the ancient people were found the clues which revealed the story of their life. Corn-cobs, corn-husks, bean-hulls, the shells of squashes and gourds, the heads of large sunflowers, the seed-heads and leaves of tobacco, all show that much of their living came from the soil; while numerous pointed sticks worn by contact with the ground, and best of all, a hoe made of fresh-water musselshell, still provided with its ancient handle of wood and its original lashings, give us some idea of how their farm-work was done. We know that they stored their crops in pits dug in the floors of the dry shelters, and lined with grass and pieces of old baskets, for such pits were found all complete, with a few scattered grains of corn or sunflower-seed left in the bottom, to tell the story of their purpose. Woven bags filled with corn, beans, squash, gourd, and sunflower-seeds, hidden in the pits or buried, wrapped in grass, under some convenient rock in the dry shelters,

show how seeds were kept over winter for the spring planting.

It was learned also that hunting must have been an important source of food, for the dusty refuse in the shelters yielded many bones of wild creatures, particularly the deer and the wild turkey, together with the remains of other species, some as large as the elk and the buffalo. Most of the bones had been split to extract the marrow which the ancient people seem to have relished greatly. In some places the deposits were so dry that they yielded even feathers, deer-hair, and scraps of buffalo-hide with the brown wool still attached. The principal hunting weapon seems to have been the spear, which consisted of a main shaft of hollow cane, perhaps five or six feet long, into one end of which was fixed a foreshaft of hard wood bearing a flint spearhead. This spear was hurled with a spearthrower or atlatl, a short stick with a handle at one end, and a projection at the other, against which the butt of the spear was rested, the whole apparatus giving additional length to the arm, and consequently greater leverage and propelling force. Strange to say, the bow and arrow were used very little, if at all. A few fragments of fish-nets, neatly woven from home-made wild-hemp strings, together with the scales and bones of various kinds of fishes, tell of still another source of food.

Most interesting and suggestive also are the bushels of hazelnut, chinkapin, and walnut hulls, and nut shells and acorn shells of every description, not to speak of the masses of wild-grape stems, which were mixed with the refuse of the ancient camps in every rockshelter. Even the edible seeds of various weeds and wild shrubs were not neglected, as numerous specimens show.

We worked out shelter after shelter, wondering what the ancient people used for axes, as we had found nothing recognizable as an implement of that kind, until one day a complete axe was found, consisting of a rudely chipped flint blade set in a short, club-like handle; then we remembered that we had found a number of such blades, regarding them as rude spear-heads, unfinished or rejected in the making.

Another article of unique interest was a nearly complete cradle-board neatly woven of cane. A number of baskets also were found, some of them nearly complete and representing three kinds of work—the coiled, the wicker, and the twilled cane types. Woven bags of several varieties, made of various native fibers and grasses, also appeared, not to speak of grass overshoes and one complete woven sandal of grass. Pieces of deerskin moccasins and of deerskin and woven feather robes also figure in the collection, together with pendants and

beads of shell, bone awls, and many other interesting articles. Little pottery was made by the Bluffdwellers—the few fragments found show that their vessels were plain and coarse, and were usually flatbottomed.

Sometimes, but not often, were found the remains of the ancient Bluffdwellers themselves, in some cases in a semi-mummified condition, and still showing parts of their clothing and wrappings. In a few rockshelters traces of a later people were discovered—a tribe also pre-Colonial, who used the bow and arrow for hunting, and apparently were unacquainted with the spear and its throwingstick used by their predecessors; they made shelltempered, round-bottom pottery, frequently decorated, and differed in other traits from the Bluffdwellers. It is possible that these later comers may be connected with some known tribe, perhaps the Osage or the Kansa; but as for the Bluffdwellers who preceded them, we may never know who they were, where they came from, or where they went. All that can be said at present is, that many of their traits seem to connect them with some tribes of the Southwest-New Mexico, Arizona, and the northern part of Old Mexico.

M. R. HARRINGTON

POTTERY OF HAWIKUH

The excavations at Hawikuh in western New Mexico were brought to a close in September last. This Zuñi pueblo, made famous by the Spanish explorers of the sixteenth century, was one of the famed "Seven Cities of Cibola," and was named Granada by Francisco Vasquez de Coronado when he camped there with his army in the summer of 1540. The excavation of Hawikuh was commenced by the Museum in 1917, and with the exception of the season of 1922 has continued each summer under the patronage of Harmon W. Hendricks, Esq., one of its trustees, and in the immediate charge of the writer.

Including the area occupied by its refuse-heaps and cemeteries, the ancient pueblo covered about fifteen acres, therefore the extent of the work may be conjectured. It has not been found practicable to uncover the entire site, yet sufficient excavation has been carried on to reveal nearly three hundred and fifty chambers, extending from one to five levels, or from a few feet to nineteen feet beneath the surface. The artifacts recovered and the subjective information gathered during the progress of the work afford sufficient data to enable a fair degree of restoration of the life of the inhabitants, who abandoned the settlement in 1670, as nearly as can be done through archeological investigation.

An important result accomplished in 1923 was the determination of the chronological sequence of the types of Hawikuh pottery. An approximate determination was possible from the observations made in former years, but definitive conclusions were reached during the last season by a study of the stratification of the refuse that had accumulated in the plaza of the pueblo, by means of a trench eleven feet in width and fifteen feet deep, carried down one foot at a time and extending from the eastern to the western house groups. It was evident that the filling of the plaza had been deliberately but rather gradually made by the inhabitants, ashes and other house refuse, as well as the waste from building, being the materials deposited. A careful record of all potsherds bearing decoration was kept, and note made especially of objects of European origin found in the fill. Study of the occurrence of the various types of pottery in the successive one-foot levels fully verified the determinations made in previous years while the graves and dwellings with their accompanying earthenware were uncovered. These observations showed that certain classes of pottery usually were associated with Spanish objects, such as china, glass beads, iron, and the like, while other kinds were never accompanied with articles of civilization. While we must await the final report on the

Hawikuh researches before presenting the evidence on which the pottery sequence is determined, it is possible to summarize the various types of earthenware even in this brief space.

- I. Black-on-white and black-on-red, non-glazed decoration, associated with excellent corrugated ware. This pottery originated at various prehistoric sites in the vicinity, and was introduced at Hawikuh in the form of sherds for grinding to temper the clay in local pottery-making, except in a few instances in which entire vessels had been dug or washed out and then put to secondary use by the Hawikuh people.
- II. The first pottery manufactured at Hawikuh consisted of red or orange ware, sometimes fired to brownish or grayish, ornamented usually in geometric patterns in black or green glaze, and in the case of bowls (which were far more numerous than jars), almost invariably with a simple geometric figure or series of figures in white exteriorly beneath the rim, as is the case also with the pre-Hawikuh non-glaze bowls (Type I). The ornamentation in Type II seems to be a reproduction, in glaze, of the mat decoration on the pre-Hawikuh vessels.

- The red slip was gradually superseded by Ш. white. Bowls are sometimes red outside and white within, but the decoration inside is always in glaze, as in Type II. In the case of the bowls that retain the exterior red slip, the ornamentation below the outer rim is generally the same as before, but sometimes the glaze used for the interior decoration is employed also for the outside ornamentation, and not infrequently a combination of glaze and mat white is used. On the other hand, the bowls with all-over white slip are ornamented both inside and outside with the same glaze as is used on those with the red slip, white of course being impossible as a medium for outer decoration. Life forms commence to appear, the macaw being a favored subject of ornamentation. Evidently by chemical change the glazing material fired sometimes to maroon or magenta.
- IV. There was only a slight step from Type III to the next. In Type IV the white slip was applied always to both the inner and the outer surfaces of the bowl, and of course (as in the case of Type III) over the entire jar. But a mat red now appears in conjunction with the glaze—the first step toward ornamentation in polychrome. The combina-

tion of black, green, or maroon glaze with mat red on white produces handsome effects. Life forms become somewhat commoner.

- V. The glaze decoration disappears, having been superseded by a mat light-red on white and often on a yellowish slip. Jars are much more common than before. The ware is not nearly so hard as that of the preceding types, seemingly owing to inferior clay.
- VI. The Hawikuh potters reached the climax of their art, so far as beauty of coloring is concerned. The paste is usually more or less friable, as in Type V; the jars are rather squat in form, but well modeled; the mat colors have a rather wide range—orange, yellow, red, brown, black—but they are soft and beautiful. Highly conventionalized figures are common.
- VII. There is little difference between this type and the last, which may be distinguished as late and early polychrome respectively. The vessels are generally larger and thicker, the paste more durable; both the patterns and the colors are bolder, and on the whole the former are more geometric; the colors lack the softness and therefore the esthetic quality of those of Type VI.

- VIII. After having been the favored style for a long time, probably for generations, the polychrome was gradually superseded by glaze decoration, which had not been in use at Hawikuh probably after late prehistoric times. At first the glaze, especially green, was applied in conjunction with the mat colors of the period, but the glaze was far inferior, on the whole, to that of the earliest glaze ware (Types II and III), both in consistency and in application, being more or less granular and far less controllable. There is a possibility that the revival of glaze in pottery ornamentation was due to influence of Franciscan missionaries, who established a church and monastery at Hawikuh in 1629. Vessels of this class are very commonly associated with Spanish objects.
- IX. Likewise found often in association with articles of Spanish origin is a type of earthenware characterized by a black-glaze decoration on a dark-red slip, the ornamentation being almost always geometric, and as crudely applied as the glaze employed in Type VIII. There is no doubt of the recency of Type IX; indeed it is not improbable that, had Hawikuh not been abandoned forty-one years after the founding of the mission, this

class of pottery would have been made almost, if not quite, exclusively. It seems to represent an attempt to reproduce Type II—the first pottery made at Hawikuh. The ware is very hard; jars are far more common than bowls; the inside of the jars is darkgray.

Intrusive Types—In addition to the pottery designated Type I, there are two classes of vessels, introduced at a later period, that should be mentioned.

- A. Gila Ware.—The first and earliest of these was obviously derived from the Gila valley of southern Arizona, doubtless by members of one of the Piman tribes who visited the Zuñis periodically, at least as late as the sixteenth century, exchanging their services for turquois and skins. The pottery is commonly decorated in mat red, white, and black, and a form of winged volute, together with various pointed motives, was a theme of ornamentation. This pottery occurs not infrequently in connection with cremation of the dead at Hawikuh, a custom practised in early times also in the Gila and Salt River valleys.
- B. Sikyatki Ware.—Pottery of this class, so characteristic of the ancient Hopi ruin of Sikyatki,

Arizona, was found at all levels of Hawikuh, with the exception of the earliest. Sikyatki was founded by the Asa clan of the Hopi, which migrated from the Rio Grande valley, perhaps in late prehistoric times, but first settling at Hawikuh. Those left at this pueblo when their final migration to Sikyatki took place, became the Aiaho clan of the Zuñis, now almost extinct. Therefore it may be supposed that these people brought with them from the Rio Grande to Hawikuh the art of making the excellent pottery of the type found at that site, and especially at Sikyatki.

F. W. HODGE

DR. BRUNO OETTEKING spent last summer in Germany, visiting museums and other scientific institutions, and discussing problems of physical anthropology with Professors Rudolph Martin, Eugen Fischer, and Theodor Mollison. He also attended the annual meeting of the German Anthropological Society during the week of August 6-13 in the old university town of Tübingen, and addressed the Society on the Aims and Objects of the Museum of the American Indian, Heye Foundation.

TERRACOTTA WHISTLE FROM GUATEMALA

A REMARKABLE whistle has been acquired recently through the purchase of the Julia Rodezno collection from Guatemala. The exact provenience of the specimen is not definitely known, but a somewhat similar object has been illustrated by Dr. Seler, which is in the Sarg collection, coming from San Cristobál Cajcoj, Department of Alta Vera Paz. This is the region of the Pokonchi, a linguistic branch of the Maya, closely allied to the Kekchi, just northward in the vicinity of Coban. The whistle in question (pl. 1) is unusually large, being 101 inches in height. It represents a seated woman, clothed in an ornamented dress, reminding us of the clothing of some of the figures of the carved stone lintels from Yachilan and other ruined cities of the upper Usumacinta river. The surface of the figure where the body is represented is dark brownish-red, but the dress still bears traces of patterns painted in greenish blue and white. A unique feature is the crudely shaped single foot protruding from an aperture in the center near the lower part of the border of the skirt. The left hand clasps a bowl or a basket containing four objects with tiny balls on the surface, probably representing nodules of copal offerings, as they closely resemble actual masses of this material recovered from the sacred cenote at Chichen Itza in Yucatan, and

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TERRACOTTA WHISTLE FROM GUATEMALA (Height, $to \frac{1}{4}$ inches)



similar representations of copal nodules are seen in the extended lower lip of human faces on incense burners from eastern Yucatan. Apparently attached to the lower part of the receptacle, there hangs below the hand a curious object with a broad band seemingly of the same character as the nodules. From the edge of the bowl or basket a narrow band or cord is stretched, the other end being held between the thumb and forefinger across the open palm of the right hand. The hair is elaborately dressed, the tresses being decorated with double bands of beads. The small ear-ornaments are unusual in having four-strand attachments extending horizontally from each disc. A simple necklace consisting of two long tubular beads, with two cord pendants, hangs from a string. The forehead is flattened, and the two upper middle incisors are filed. From the upper part of the head is a stublike projection, or handle, with two perforations apparently for suspension. The mouthpiece of the whistle is small, and is at the base on the undecorated back of the figure. Two large vents are at the back of the ears.

The whistle is one of the most interesting and certainly one of the largest of this class of objects that we have seen from the Mayan culture area. The Pokonchi and Kekchi Indians developed the potter's art to a high degree of perfection, as evi-

denced by this whistle and by the many other clay artifacts which have been described and illustrated from time to time by Seler and Dieseldorff.

M. H. SAVILLE

GLASS BEAD MAKING BY THE ARIKARA

Among the interesting objects recently obtained during a field study of the material culture of the tribes of the Missouri River region is a stone mortar which is known to have been in possession of an Arikara family "since before the time of the trouble with the American army," that is, in 1823, when the Arikara villages on Grand river were attacked and destroyed by Gen. Henry Atkinson.

The interesting fact in connection with this mortar is that it was one used in pulverizing glass beads for their reworking, an art long known to have been practised by the Arikara, for it is described by Lewis and Clark (Original Journals, vol. 1, p. 272). From the former owner of the mortar, and also from another old woman of the tribe, the manner in which the work was done and the reason for doing it were learned. When asked why the people of their tribe in former time went to the trouble to destroy the beads which the traders brought them, and to make the glass over again into beads, the old woman said: "The traders of that time brought

our people very large beads, as large as plums, and our people did not like them. For that reason they pulverized them, and worked them over into beads no larger than chokecherries, and also into pendants and other decorative objects."

These informants said that the traders' beads were first pulverized, the different colored beads separately. Then they prepared a firing pan from the brass rim or binding of the butt of an old musket on which was laid a bed of sand. The powdered glass was moistened with water; then with a fine wooden tool this glass paste was shaped into the forms desired on the prepared bed of sand. The firing-pan was carefully placed in a hot fire of dry elm wood, this wood being used because it would burn quietly without snapping or crackling. When heated to the proper temperature the glass paste became fused. Perforations were kept open by insertion of sand. When quite cooled after fusing, the beads or other objects were taken from the sand bed, and the sand was shaken out of the perforations.

MELVIN R. GILMORE

METAL EFFIGY PIPE FROM NEW YORK

The pewter or lead pipe shown in the accompanying illustration (pl. 11) has just been obtained from Mrs. Helen Collingwood of New York City. It was found at White Springs, near Geneva, Ontario county, New York, about 1830, and had been in possession of the Collingwood family since that time.

Pipes made of metal have been found in various parts of the north Atlantic seaboard, but most of them are either of the simple type, with no bowl embellishment, or are provided with a platform that extends outward from the upper edge of the bowl; on the end of some of these projections the figure of a wolf, a bear, or some other animal is shown, molded in the round. It has often been stated that the Indians did not become sufficiently adept in the arts of the white man to cast such elaborate objects as pipes, although in his Key to the Indian Language, published in 1643 (Collections of the Rhode Island Historical Society, vol. 1, Providence, 1827), Roger Williams says: "They have an excellent art to cast our pewter and brasse into very neate and artificiall pipes." Dr. W. M. Beauchamp, who has made an exhaustive study of the material culture of the eastern Indians, agrees with Roger Williams in his statement that the



METAL EFFIGY PIPE FROM NEW YORK (Length, 8 inches)



Indians did cast pipes of pewter, but he says that their ability to cast brass may be doubted.

Metal pipes with an animal figure extending downward over the outer surface of the bowl and over a portion of the stem are quite rare; but carved of stone, the type is represented by many examples from lower Canada and by a few from New England.

G. H. PEPPER

YUIT ESKIMO COLLECTION

Each spring the firm of Liebes & Company, fur dealers of San Francisco, sends to the Arctic coast a vessel which makes one of its stops at St. Lawrence island for the purpose of trading with the natives. During the voyage last year, Mr. Arnold Liebes gathered a collection exceeding 1200 specimens illustrating the ethnology of the St. Lawrence branch of the Yuit Eskimo, which has been acquired by the Museum. The objects represent a wide range, from tiny ivory gaming dice to a large sled. The clothing for both winter and summer wear is quite varied and of great interest, but perhaps no more interesting than the steatite lamps and cooking utensils.

ESKIMO LAMPS AND COOKING VESSELS

Few Arctic explorers have failed to note the important part the lamp plays in the lives of the Eskimo, whose entire domestic life seems to be directed toward this household appliance. Indeed it may be said that their very existence depends on the possession of the lamp, because it has made possible their occupancy of an otherwise uninhabitable region. Although in accessible parts the primus stove is now being used by the Eskimo for heating and cooking, the native lamp is always held in reserve for emergencies.

Eskimo lamps are made of stone, earthenware, bone, and sometimes of wood, depending largely on the material at hand. They are made in a variety of forms, but certain types seem to prevail throughout the northern edge of the American continent. Steatite is the favorite material for the manufacture of lamps and cooking vessels, because it is easily carved, it retains heat, and may be repaired when broken. Seal-oil and blubber are preferred for burning in the lamps, but caribou and other animal fats are sometimes used.

There are two kinds of lamps in use among the Eskimo—the small traveler's lamp, and the large house lamp that belongs to the women. Sometimes a very small lamp is used only for lighting purposes in the house. When an Eskimo family is on the

move the large lamps are usually well wrapped in a bundle of skins and carried by the women on their backs in order to prevent breakage by the bumping of the sled over the rough ice, should they be packed thereon with other belongings.

Among the ethnological specimens recently acquired is a collection of steatite lamps and cooking vessels from the Copper Eskimo of Coronation gulf, which makes the series of such utensils in the Museum exceptionally complete. Unique in this new collection are two lamps of extraordinary size—one measuring 41 inches long and averaging 8 inches in width, the other 37 inches long by 9 inches in width. These lamps are of the long, narrow type common to the Coronation Gulf region, with straight fire edge and rounding ends. The larger lamp averages'3 inches in height, with a moss-pan 4 inches wide and an inch and a half deep. The lip of this lamp, upon which the burning moss rested, tapers from an inch and a half at the bottom of the pan to the fire edge. In use, the length of the flame required on the fire edge varied according to the size of the cooking vessel or the warmth of the house. A reservoir for holding the fuel is cut in the back of the lamp and raised three-eighths of an inch from the bottom of the pan; it is an inch and a half wide in the center and tapers to three-quarters of an inch at the ends, the inside wall being the

same height as the lamp, with channels cut at the extremities to allow the melting fuel to flow into the moss. The function of the reservoir is to regulate the flow of oil to the moss wick.

In construction the smaller of the two lamps closely resembles the large one, with the exception that it is an inch wider, and has a larger reservoir, with a channel cut in the center of the wall, as well as at the extremities.

Two fine cooking vessels of steatite are also represented in this collection, the larger measuring $37\frac{1}{2}$ inches long, $6\frac{3}{4}$ inches wide, and 5 inches deep—an unusual size for Coronation gulf, although vessels have been reported from this region as large as 40 inches in length. The smaller vessel is $26\frac{1}{2}$ inches long; 7 inches deep, and $9\frac{1}{2}$ inches wide in the center, tapering to 8 inches at each end. This type of vessel is rare among the Eskimo of Coronation gulf. Both vessels are perforated at the corners for suspension, and in use are swung on rods that may be shifted over or away from the flame.

Cooking vessels and lamps, especially the extremely large ones, are a constant care to the Eskimo women, and it is seldom that they will part with them. The Museum therefore is fortunate in obtaining such excellent examples of these rare and interesting household utensils as are here described.

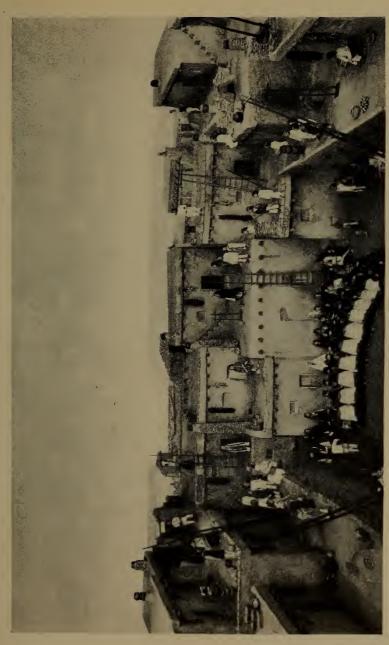
D. A. CADZOW

MOTION-PICTURES AT ZUÑI

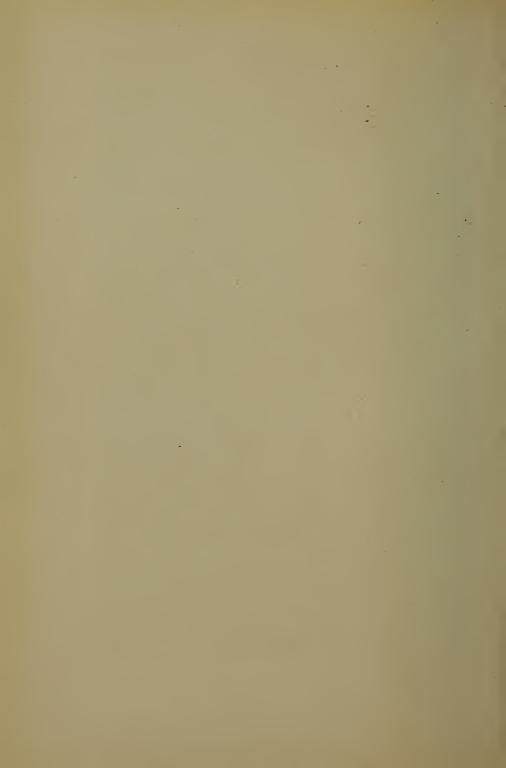
ADVANTAGE was taken during the researches by the Hendricks-Hodge Expedition at Hawikuh, last summer, of making a series of motion-pictures illustrating the arts and industries, as well as some of the ceremonies, of the Zuñi tribe. This record, comprising about 10,000 feet of film, would not have been possible without the support of Mr. James B. Ford, whose deep interest in the welfare of the Museum has been manifested in so many ways. Realizing the need of graphically recording the activities of a typical Pueblo tribe while the opportunity still exists, Mr. Ford not only presented to the Museum the necessary apparatus for making and projecting the pictures, but met the expenses of the Zuñi expedition. The work was done by Mr. Owen Cattell, assisted by Mr. Donald A. Cadzow of the Museum, and by Lorenzo Chaves, a Zuñi Indian. All the more important arts and industries of the tribe are illustrated, from potterymaking, house-building, and blanket-weaving, to bread-baking and hair-washing. Fewer ceremonies were conducted during the summer than usual, but such as were held were pictured, including the rites in the sacred spring at Ojo Caliente, two of the Rain dances, and the "Santo" ceremony. Altogether the results are most successful. An exhibition of a series of the pictures, representing about half the film made, was given in November for the benefit of the employees of the Museum; the remainder will first be shown during the current month; but plans for the general exhibition of the pictures as an educational feature have not yet been developed. Such important changes in the life of the Zuñi tribe have recently taken place as to make it practically certain that before many years little of the old life will remain. The importance of the motion-pictures made by the Ford Expedition is therefore apparent.

A ZUÑI MODEL

That an impression of the character of the dwellings, the mode of life, and the environment of the Pueblo Indians of New Mexico and Arizona may be gained by visitors to the Museum, there has been installed in a corner of the stairway hall on the first floor, a model of a group of houses of Zuñi pueblo (pl. 111) prepared by Mr. William C. Orchard of the Museum staff. In this miniature reproduction, not alone the flat-roofed, terraced dwellings are exhibited, but the activities of the people, so far as they can be illustrated by a model, are presented in a very successful manner. The houses themselves naturally partake of the reddish color of the surrounding country, which changes with



MODEL OF A CORNER OF ZUÑI PUEBLO (Prepared by William C. Orchard)



the clouds and the position of the sun from morning until evening, for Zuñi is built of the very rocks and earth and sand that give such wonderful tones to the mesa-rimmed valley from which it rises. In the model, a rain ceremony is shown to be in progress; the dancers wear masks and are attired in costumes that represent the sacred beings which they impersonate. They wear an embroidered cotton kilt, with a long-fringed cotton sash dangling from the hip and with a fox-skin suspended behind. Back of the knee is fastened a turtleshell rattle, and in the hand is held a rattle made of a gourd. In the flowing hair, downy eagle-feathers are tied in place; about the waist and the ankles are attached small green branches of spruce, while turquois and white-shell necklaces are worn in profusion. Large silver wrist-guards are commonly worn, and turquois-blue moccasins are used or not as the particular ceremony may prescribe. Among the participants shown is the priest-leader who holds a bowl of sacred meal which he sprinkles from time to time throughout the performance. The Koyemashi, grotesque personages popularly known as "mudheads" on account of their warty mud-colored masks, are the sacred clowns who serve as attendants during the dance, but entertain the assemblage during intermissions. The model shows many of the natives gathered round about witness-

ing the ceremony, with every detail of which they have been familiar all their lives. Of a more utilitarian nature are the dome ovens for bread-making, the strands of chiles and green corn suspended for drying outside the houses, and the ladders leading to the upper stories. In the background looms the old Franciscan church, long in disuse; and in the distance the sacred Corn Mountain, Towayalane, in the sides and on the summit of which are a number of shrines. Altogether the model not only adds much to an understanding of the objects from the Pueblos, and especially those from Zuñi, exhibited in adjacent cases, but will prove to be the means of showing to visitors one of the many strange corners of our great land.

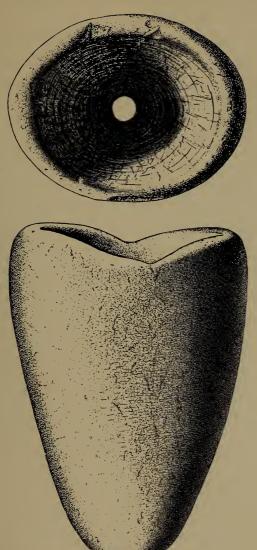
Paul Henning, well known as a student of Middle American ethnology and archeology, recently passed away after a long illness, in the state of Oaxaca, at the age of fifty-one. Mr. Henning was associated with Prof. M. H. Saville in the researches by the James B. Ford Expedition to Guatemala during 1917 and 1918. His most important work while connected with this expedition was the partial exploration of a new culture area near Caballo Blanco, on the Pacific coast, which resulted in the discovery of an interesting type of pottery.

EXCAVATIONS AT KECHIPAUAN, NEW MEXICO

While researches were in progress at Hawikuh during the summer of 1923, excavations were conducted at the related Zuñi ruin of Kechipauan, about $3\frac{1}{2}$ miles toward the east. Work of an experimental nature had been carried on at Kechipauan by the Hendricks-Hodge Expedition of the Museum in 1919, primarily for the purpose of determining its relation to Hawikuh, in the course of which a number of graves were opened. The result of this excavation, which covered a period of only about two weeks, showed beyond question that the history of the two pueblos during the Spanish period was virtually the same, there being no material difference in the types of pottery produced, while the presence of European objects was noted at Kechipauan, as well as at Hawikuh. A brief paper by Mr. Hodge on the Age of Kechipauan, published by the Museum, is based on the determinations then made.

The investigations at Kechipauan in 1923 were conducted under the joint auspices of the Museum of the American Indian, Heye Foundation, and Louis C. G. Clarke, Esq., Director of the University Museum at Cambridge, England, and were in immediate charge of Dr. Samuel K. Lothrop, assisted by Mr. C. O. Turbyfill, of the staff of the former

museum. One of the most interesting results of the excavation, which occupied more than two months, was the discovery, beneath and adjacent to the houses of the more recent pueblo, of the remains of much earlier dwellings of excellent masonry, characteristic of that of the circular kivas near Hawikuh rather than of either the later Kechipauan or Hawikuh structures. The pottery accompanying these earlier dwellings and their associated burials is of the black-on-white and black-on-red varieties, whereas the earthenware of historic Kechipauan is identical in type with that of Hawikuh, a note respecting which appears herein. Judging by the scarcity of objects of European origin found at Kechipauan, it would seem that the effect of Spanish contact was not so great as at Hawikuh, although a church was built at each pueblo by the Franciscans. Whether the Kechipauan mission was ever fully established is not known, as there seems to be no Spanish record of it, and no mention is made of Kechipauan as one of the Zuñi villages at the time of the Pueblo rebellion of 1680. A small but interesting kiva with rounded corners, reduced from its original size by more or less reconstruction, and abandoned and filled in before Kechipauan itself was deserted, was completely uncovered. It is quite probable that other kivas were in use at Kechipauan during its occupancy.



BLUFFDWELLER PIPE (Actual size)

A BLUFFDWELLER PIPE

The collection from the dry rockshelters of the Ozark mountains has just received a notable addition in the form of a curious old pipe, found near Eureka Springs, Arkansas. During the nine months spent by the expedition in exploring the dry shelters (see page 3) no pipe was found, although occasional leaves and seed-heads of tobacco unearthed in their dusty refuse deposits showed that the weed was known to the ancient Bluffdwellers. Consequently we were much interested when we saw, in a private collection near Pineville, Mo., a pipe of tubular form, which the owner assured us was found in a rockshelter, and later when a similar example appeared in another private collection, that of Mr. Charles Stehm, at Eureka Springs, Ark. We finally persuaded Mr. Stehm to part with the pipe, on the ground of its importance to the Museum collection. The specimen (pl. IV) is of sandstone, of the tubular or "cigar-holder" type, and measures about $2\frac{3}{4}$ inches in length. The form is somewhat conical, but its section is oval rather than circular. The drilling of the bowl has been done apparently with a flint spear-head from the large end of the cone, stopping within half an inch of the small end; the stem-hole was then drilled from the small end with a cylindrical drill, probably also of flint. The striation in the bowl shows

that after the drilling was completed, the mouth was enlarged by scraping, evidently with a flake.

M. R. HARRINGTON

ETHNOLOGICAL COLLECTIONS FROM PARAGUAY

Among the recent important collections acquired by the Museum is one comprising nearly 1100 specimens illustrating the ethnology of the Guano, Tumraha, and Chamacoco tribes of the Chaco district of Paraguay. Noteworthy among the objects are head-dresses, made of feathers of the rhea, the heron, and other birds, such as are worn by medicine-men, and girdles, arm-bands, and robes, ornamented with feathers, used in various ceremonies. There are also bags made of karaguata fiber, worn as masks in dances; these are so loosely woven that the wearers may see through them. There are many wooden smoking-pipes, which vary in form from plain cylinders to figures of conventionalized human beings; also numerous wooden clubs, averaging four feet in length, the blades of which are ancient stone celts, while other bladed clubs are carved entirely of wood. The collection was gathered in Paraguay twenty-five years ago by Mr. A. V. Fric, of Prague, Bohemia, while engaged primarily in gathering medicinal plants.

RECENT ACCESSIONS BY GIFT

THE MUSEUM has been most fortunate in its gifts by friends during the last few months. The collections received by this means in November and December alone are as follow:

From Mrs Thea Heye:

Blanket of blue cloth decorated with buttons and with a man's figure in dentalium and haliotis shell. Tlingit, Alaska.

Two large water jars and a cooking pot. Zuñi, New Mexico.

Large cottonwood drum and stick. Hopi pueblo of Shipaulovi, Arizona.

Cottonwood drum. Zuñi, New Mexico.

Large oval basket decorated with shell and glass beads and feathers. Pomo, California.

Basket. Pomo, California.

Basket and cover decorated with glass beads. Panamint, California.

Two baskets, one with rattle cover. Tlingit, Alaska.

8 Baskets. Diegueño, California.

Basket. Tulare, California.

Basket. Apache, Arizona.

3 baskets. Hupa, California.

Basket. Pima, Arizona.

Basket. Maidu, California.

3 Baskets. Tlingit, Alaska.

Basket. Papago, Arizona.

Also the following objects from the Valley of Mexico:

5 Shell pendants and a fragment of another.

Large stone bead.

Circular jade pendant.

5 stone pendants representing human heads.

2 Cylindrical beads.

Crude white stone idol representing a human figure.

Stone plummet-shape object.

Small pottery jar of brown ware with incised decoration.

Pottery figure of archaic type representing a woman.

Small greenstone jar representing a human head.

Obsidian pendant representing a monkey's head.

Obsidian labret.

55 jadeite beads.

10 copper axes.

From Whongho Nemah:

Catlinite pipe with wooden stem. Chippewa of Cass Lake, Minnesota.

From J. C. Burnet:

Medicine bundle, from Scar Face, an Arapaho.

From George F. Will:

Arikara basket, and a lot of potsherds, flint implements, bone and shell, from a Mandan village-site, North Dakota.

From George Warner:

2 arrowpoints from Middleburg, Schoharie county, New York.

From Mrs Mary Bussing:

Pair of small basketry ear-drops, Mexico.

2 miniature baskets.

Horse-hair ring. Papago.

Miniature basket and cover. Mexico.

2 Baskets and covers. Makah, Washington.

Basket. Modoc.

Basketry cap. Shasta.

Basket. Quileute, Washington.

3 baskets. Tlingit, Alaska.

Birchbark box and cover decorated with quillwork. Micmac.

From Lieut. G. T. Emmons, U. S. N.:

Center fragment of a stone war-pick. Wasilla, Alaska.

From P. J. McGough:

6 "cog-wheel" stones. Long Beach, California.

From John Ward Dunsmore:

20 arrowpoints. Dover, Pennsylvania.

From K. G. White:

Arrowpoint. From Wadsworth avenue and 189th street, New York City.

From S. K. Lothrop:

Pottery jar representing a man lying on his side, with a stone yoke encircling his waist. Santa Cruz, Guatemala.

Irom C. G. Wallace:

Ancient pottery canteen from the Zuñi valley, New Mexico.

From the Bruce Museum, Greenwich, Connecticut:

2 argillite knife-blades. Sound Beach, Connecticut.

From W. de F. Haynes:

Large bowl, punctate decoration. South Carolina.

Small globular pottery receptacle with perforations. South Carolina.

From Ernest G. Tabor:

Pottery platform pipe, found on Parkers pond, near Cato, Cayuga county, New York. Tuscarora.

From Mrs J. Francis Murphy:

Gorget and three arrowpoints. Margaretville, N. Y.

Sinew-working stone. Delaware county, New York.

 $_{5}$ fragments of pottery and $_{2}$ stone axes. Ironia, N. J.

Pipe bowl and two arrowpoints. Basking Ridge, N. J.

3 arrowpoints and a stone axe. Lake Hopatcong, N. J.

2 arrowpoints and a small pendant. Pennsylvania.

Piece of mica, hematite celt, and birdstone. Long Island, N. Y.

Bannerstone, cache blades, 5 celts, 4 hammerstones, 4 net-sinkers, large stone axe, copper arrowpoint, 2 pieces of copper, a scraper, 4 drills, a fragment of pipe bowl, 3 fragments of pipestems, 2 fragments of pottery, 234 arrowpoints, 3 spearpoints, and 3 beads. Arkville, N. Y.

Stone axe. Split Rock, N. J.

Stone celt. Virginia.

From Paul Burlin. Presented in memory of Mrs. Natalie Curtis Burlin: Ghost-dance shield. (Presented to Mrs. Burlin by Short Buffalo Bull in 1904.) Sioux of Pine Ridge reservation, South Dakota.

From Reginald Pelham Bolton:

From a shellheap, foot of Dyckman street, New York City:

2 fragments of shell whorls for wampum-making.

2 potsherds.

11 mammal and fish bones.

Natural concretion.

7 chipped stone flakes.

5 arrow- and scraper-points.

Fragment of trade-pipe stem.

9 fragments of colonial glass and china.

From Prescott Van Wyck:

Seated figure of pottery. Western Mexico.

Pottery whistle. Aztec. Valley of Mexico.

From Mrs Helen Collingwood:

Chipped blade.

From Mrs Samuel Bayley:

9 pestles and a large ovate grinding stone of scoria. Santa Barbara, California.

From W. L. Calver:

19 arrow- and scraper-points. Fort Independence island, West Point, N. Y.

From Norris L. Bull:

Pitted stone. South Glastonbury, Connecticut.

Basket. Mohegan, Connecticut.

From C. Lauxman:

3 arrowpoints.

From Col. C. S. McNab:

5 pottery beads, 3 potsherds, 6 obsidian knives, and 4 arrow-points. Mexico.

NOTES

The annual meeting of the American Anthropological Association in New York during Christmas week was the occasion of visits to the Museum by a number of its members, including President Walter Hough, curator of anthropology in the National Museum at Washington; Secretary A. V. Kidder and Mr. Warren K. Moorehead of the Department of Archeology of Phillips Academy; Miss H. Newell Wardle of the Academy of Natural Sciences of Philadelphia; Mr. Earl H. Morris and Mr. Frans Blom of the Carnegie Institution of Washington; Mr. Neil M. Judd of the National Museum, and Prof. J. E. Pearce of the University of Texas.

The archeological objects recovered during the excavation of the Burton mound in Santa Barbara, California, by an expedition made possible through the generosity of Mrs. Thea Heye, have thus far not all reached the Museum, but those received prove the site to be one of great importance, especially as this ancient Chumashan village was situated at the junction of the trail along the coast and that from the east. In the near future a statement will be issued by the Museum concerning the skeletal remains found beneath the so-called reefrock layer, and the artifacts that accompanied them.

DR. MELVIN R. GILMORE, of the Museum staff, has returned to New York after a successful season in gathering objects and information on the material culture of some of the tribes of the Missouri River region. In the course of his investigation Dr. Gilmore procured data on the intertribal commerce between the Missouri river tribes and the outlying tribes of the high plains and mountains to the west, and of the woodland to the east—information regarding commodities of export and import, standard measures, and prices and customs of commerce.

Prof. Marshall H. Saville lectured before the New York Society of the Archaeological Institute of America, at Columbia University, on December 1st, and the Buffalo Society of Natural Sciences on January 4th, on Ancient Maya Cities of Yucatan. On October 17th an address by Professor Saville on New Material on the Voyage of Cortés in Mexico, 1518-1520, was presented before the American Antiquarian Society at Worcester, Mass., and on January 11th before the New York Genealogical and Biographical Society.

In May of last year, two Indian skeletons, male and female, were discovered in what is assumed to be a prehistoric site at Warehouse Point, near Hartford, Conn. The bones were carefully preserved as they appeared in their original position, under the care of the local archeologist, Mr. Norris L. Bull, and examined on the spot by Dr. Bruno Oetteking of the Museum. The bones were then transmitted to the Department of Physical Anthropology of the Museum, where they are now the subject of close examination.

The LIBRARY of the Museum has been greatly enriched through the gift by James B. Ford, Esq., of the excessively rare Vocabulario en la Lengua Castellana y Mexicana, by Fray Alonso de Molina, Mexico, 1555; The Jesuit Relations and Allied Doeuments, edited by Reuben Gold Thwaites, in 73 volumes, and Vues des Cordillères et monuments des peuples indigènes de l'Amérique, by Alexander von Humboldt, Paris, 1810.

DR. HENRY CRAIG FLEMING, of New York, who made certain medical observations on the Zuñi Indians of New Mexico during the operations of the Hendricks-Hodge Expedition at Hawikuh in the summer of 1921, has published the results in *The Nation's Health* for August 15, 1923. This article is to be extended and with additional illustrations will appear as a publication of the Museum.

Dr. Thomas Gann, who was engaged in archeological explorations in British Honduras during the

years 1917 and 1918 for the Museum, was a recent visitor. Dr. Gann has become connected with the Carnegie Institution of Washington, and will take an active part in the proposed explorations at Chichen Itza, Yucatan.

At the opening meeting of the American Ethnological Society, held at the American Museum of Natural History on October 22d, Mr. Harrington presented an account of the results of his Recent Excavations in the Ozark Mountain Region, and Mr. Hodge described the Sequence of Pottery at Hawikuh, New Mexico.

By GIFT from Mr. Thomas A. Joyce, of the British Museum, the Museum has received a copy of *Scenes and Studies of Savage Life*, by Gilbert Malcolm Sproat, London, 1868.

MR. W. WILDSHUT has added to the important ethnological collections which he has procured for the Museum by acquiring a beaver bundle and the medicine pipes of the Blackfoot Indians.

DR. S. K. LOTHROP sailed for Salvador on January 5, where he will conduct an archeological reconnoissance and later settle at some typical site for extended excavation.

Exceeding all expectations at the time the Museum opened its doors to the public on November

15, 1922, the number of visitors during the first year reached 92,155.

MR. Hodge was in attendance at the meeting of Secretary Work's Advisory Committee of One Hundred on Indian Affairs in Washington on December 12-13.

MR. CHARLES O. TURBYFILL returned the first of the year from Crittenden county, Arkansas, where he spent two months in archeological exploration.

At the annual meeting of the Maya Society in New York in December, Prof. M. H. Saville was elected vice-president and Mr. Hodge a councilor.

THE MUSEUM has received eight photographs of Modoc Indians as a gift from Mr. B. C. Carroll of San Francisco.





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No. 2

The New Museum Site

THE indebtedness of the Museum to Archer M. Huntington, Esq., who gave the site on which the present building stands, has been further increased by his munificent gift to the Museum of a triangular plot, comprising about six acres, bounded by Eastern boulevard, Middletown road, and Jarvis street, near Pelham Bay park, in the Bronx. The situation of this tract is shown on the accompanying map (fig. 2).

Even before the Museum was formally opened to the public in November, 1922, it was realized that the enormous increase in the collections from the time the building at Broadway and 155th street was erected in 1916, would necessitate additional facilities for display and study ere many years elapsed. At the present time the exhibitions on the three floors of the Museum devoted to the purpose are unsatisfactory by reason of crowding, while storage facilities for study collections are entirely inade-



FIG. 2.—Site of the Museum Building at Broadway and 155th Street; and of the newly acquired property near Pelham Bay Park.

quate, every available foot of space in the basement of the building being utilized.

It is therefore with gratification that this timely gift of additional land to the Museum by Mr. Huntington has been received by the trustees. It is planned to erect ultimately on the new site a building of sufficient capacity to enable the display of collections, to provide rooms for students of American archeology and ethnology, to afford storage of study and exchange collections in such manner that they may always be accessible, and to provide laboratory space. In addition it is planned to include a properly equipped hall for lectures on the subjects to which the foundation is devoted. It is the intention to continue the use of the present building for exhibition purposes.

Such a program will involve considerable time and expense. It is not proposed to erect the entire building at once, but it is hoped that in the near future work will be commenced on its first unit. Before that time, however, the area that will form the open court will be devoted to Indian gardens, where varieties of vegetal products long raised by the Indians may be cultivated. Later, large outdoor models of Indian habitations will be constructed as a part of the display of native activities.

GEORGE G. HEYE,

Director

TEOKANHA'S SACRED BUNDLE



F SEVERAL sacred bundles obtained in 1923 from the Omaha tribe, one was that of Teokaⁿha (fig. 3). It is thought well to give here a description of this bundle because it so well exemplifies certain

types of sacred objects among the Omaha and other tribes. The bundle was obtained from Teokaⁿha's son, George Ramsey, who was willing for the Museum to have it in order to commemorate his tribe in general and his father in particular. This bundle is a composite of four units of objects of the class termed by the Omaha as wahube (holy).

The four units in the bundle are: (1) an emblem of the revelation and gift of power granted to Teo-kaⁿha at his puberty fast; (2) the emblem of a revelation and gift of power granted to him in the prime of his manhood as a free favor from the buffalo, and not as a reward of fasting; (3) Teo-kaⁿha's war bundle, which he had by inheritance from his father; (4) emblems of the Wichita Society, or "Red Medicine Society," of which Teokaⁿha was a member. Therefore this bundle well represents several phases of Omaha thought and belief concerning supernatural powers and the obtaining of favors by men from the Higher



Fig. 3.—Teokaⁿha and his sacred bundle. The portrait is from a bust in the Museum.

Powers. Teokaⁿha was born in "the year the stars fell," i. e., 1833. At that time the Omaha village was at the site of the present town of Homer, Nebraska; but when Teokaⁿha was about four years of age the Omaha moved from that place and settled on Elkhorn river. While living here he reached the age when it was customary for boys to go out fasting for four days and four nights, holding lonely vigil in a solitary place for the purpose of obtaining favor from Deity, such favor being manifested in a vision.



Fig. 4.—Two of the articles in Teokaⁿha's bundle.

(Length of rabbit-skin, 25 inches)

In Teokaⁿha's vision there appeared to him the Jack-rabbit, and it seemed to have a dark-tipped eagle-feather attached to its head at each ear; therefore the Jack-rabbit became his personal patron and guardian spirit. According to custom in such cases he soon after procured a jack-rabbit skin to keep in his possession as a token of the favor granted him, to be a continual reminder and assurance to his faith in the revelation which had been granted to him in his youth. The significant promise of the vision is that the one to whom it was given should be endowed with the peculiar powers and capabilities of the creature which he had seen in his vision. The peculiar powers of the jack-rabbit are its elusiveness before its enemies. It has great swiftness and ability to dodge and elude pursuit. In the first place, because of its unobtrusive form and color blending with its natural surroundings, it is difficult to discover while motionless; and in flight its swiftness soon puts it beyond pursuit, or, if followed, the pursuer often finds that the jack-rabbit has dodged and doubled back on its course, so that the pursuer has passed beyond and lost track of it. So the person who has the Jack-rabbit as his patron trusts that he shall be given these powers of escape from his enemies when hard-pressed in war.

The second unit of this composite bundle of Teokaⁿha is an emblem in commemoration of a revelation and gift of power which came to him as a free gift from the Buffalo, and was not evoked by fasting. It came about in the following manner: One time when he was a young man he was appointed, on the occasion of a buffalo hunt, as one of the riders and killers, as he had a good buffalo horse and himself was well skilled in the work. He wounded a buffalo, which then charged, and his horse became frightened and Teokaⁿha was thrown. The wounded buffalo advanced and stood over him. but did not attack him. Blood spouted from the nostrils of the wounded animal and streamed over the face of the helpless man. He wiped the blood from his face as well as he could, and, watching his opportunity, crawled away. The wounded buffalo finally fell and died. The butchers then came up, and pursuant to custom cut up the meat and divided it according to tribal law, the skin going to the one who had killed the animal.

That night in his sleep Teokaⁿha had a vision of the buffalo which he had killed. He saw the animal standing on the prairie with tail erect, and now not blood but water was spouting up from his nostrils to a considerable height. In the spray thus caused there was the appearance of a rainbow; and the buffalo was pawing up the moist earth and

seemed to be trying to cast the lumps of mud over himself, and at the same time the spray of water seemed to be directed to cleanse the wound. And the buffalo spoke and said, "Thus you shall do." Teokaⁿha awoke and the vision was so forcibly impressed upon his mind that he was unable to sleep again, and all the rest of the night he continued to ponder over this strange thing. It seemed to him that this vision must have been given him as a sign that he was te ithaethe (in the Omaha language, te, buffalo; ithaethe, supernaturally favored). He therefore cut off the tail of the very buffalo he had killed, and which appeared to him afterward in vision, and kept it as the symbol of the favor granted to him, and used it always afterward in the treatment of wounds, contusions, and broken bones, for surgery was the prerogative of the "buffalo-favored." The surgeons were a fraternity of those who had received a buffalo vision, either as an answer to prayer and fasting, or, as in this instance, as a free gift. A buffalo vision was considered a divine vocation to the office and work of a surgeon.

Teokaⁿha ceremonially laid away the buffalotail in a proper covering, from which it was brought out on occasions for use in healing. In his practice Teokaⁿha sprayed clear water upon the wound, as he had been taught by the buffalo

when it spoke to him and said, "Thus you shall do." He would also sing a song to invoke the power of the buffalo. The words of the song may be translated as follows:

I am sending the water, I am sending the water, I am sending the water, I am sending the water. I have sent the water (Into the wound to heal,) I have sent the water; It has reached you to heal. I have sent the water.

At the close of the song he gave an imitation of the bellowing of the buffalo.

The third unit of the composite bundle is Teokaⁿha's war bundle which he inherited from his father, Mahiⁿzi. The war bundle contains a cane whistle, an eagle-feather, a kit-fox skin, and a whip (fig. 5).

Teokaⁿha's son, from whom the bundle was acquired for the Museum, could not tell how his grandfather had first obtained it, whether he had inherited it from his father, or had it by direct revelation in a vision. However that might be, it came to Teokaⁿha in the line of one who had been originally so favored.

It may be supposed that the powers represented by the kit-fox skin are the swiftness and shrewdness of that animal, and that the value to the holder

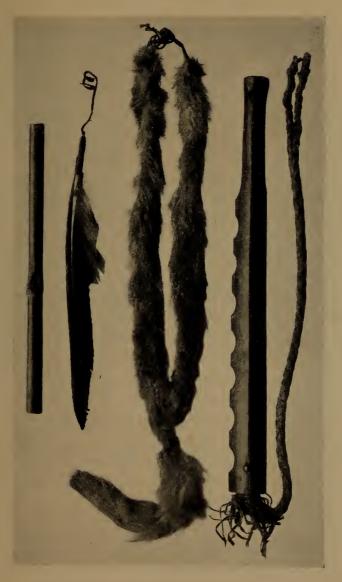


FIG. 5.— Part of Teokaⁿha's medicine bundle.

(Length of whip-stock, 19 inches)

[59]

of such an emblem lay in the ability to invoke these powers for his own aid. The eagle-feather likewise, of course, represents the great powers of that bird, its strength in flight, its keenness of sight, its boldness, and its assurance in the accomplishment of purpose. The whistle is made from a large cane which is not native to the country of the Omaha, but it is supposed to have been obtained in the South. Whistles made from this species of cane are quite common in war bundles of Siouan tribes, even so far north as the Winnebago.

Before going into battle or on a journey, Teo-kaⁿha used to place the kit-fox skin on the neck of his war horse and would fasten the eagle-feather at the base of the horse's tail. He said when he did so the horse seemed to be aware of it, and to be very proud and conscious of the power which the objects conferred, hence his speed and power of endurance were increased.

Teokaⁿha carried the whip in his hand, not to punish the horse, he said, but as a means to impart to the horse the powers represented by it from its mystic character. The lash of the whip consists of braided strands of buffalo-skin; the handle is made of a kind of wood which the Omaha call $abla a^n zi$ (yellow wood) and which is comparatively rare in the Omaha country; it is the red mulberry (Morus rubra L.).

An incident was told of the use of this war bundle by Teokaⁿha on one occasion. He was out alone, riding his war horse; the fox-skin was on the horse's neck and the eagle-feather on the tail, and he had the whip in his hand; but he had no weapons. Suddenly he saw a number of enemies, Dakota,

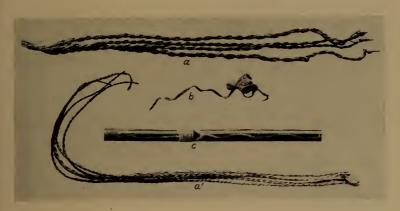


Fig. 6.—Sweetgrass braids (a, a'), "red medicine" (b), and cane whistle (c) from Teokaⁿha's bundle.

(Length of whistle, 13 inches)

coming, and they were trying to surround him. Being unarmed he was doubtful, but he kept talking to the horse and struck him four times with the whip. (Four is the perfect number, the mystic number of power.) When he looked back he could see that he was gradually and surely drawing away from the enemy.

The fourth unit in the sacred bundle of Teokanha consists of emblems of the secret society of the Omaha which they call the Wichita Society, because it came to them from that tribe. It is commonly called the "Red Medicine Society" because the principal element in their cult is the so-called "red medicine," maka" zide in the Omaha language (fig. 6). This "red medicine" is the seed of a thorny leguminous shrub, the coral bean (Erythrina flabelliformis) which grows in southern New Mexico and Arizona. The Wichita Society is nonexistent now among the Omaha, and little can be learned about its organization, purposes, and teachings. Besides the Erythrina seeds there are a cane whistle similar to that pertaining to the war bundle, and eight strands of sweetgrass (Savastana odorata).

No doubt this sacred bundle was originally wrapped in buffalo-hide, but this wrapping has been gone for many years. Since the original covering has been gone, it was replaced by four wrappings, one over another, of cloth, one of these being of bunting with stars and stripes like the national flag. In these later days it is very common to find sacred objects wrapped in the American emblem.

MELVIN R. GILMORE

ANCIENT SMOKING-PIPES FROM ECUADOR

Up to the present time nothing has been known concerning the custom of smoking in ancient Ecuador. In 1907 the writer secured from Agua Fria, Province of Esmeraldas, a hollow, pottery human head having a perforation in a short, rudely formed stub extending backward from the base of the head. At the time it was procured, it was recognized as perhaps a smoking-pipe, but in the light of two other specimens acquired during a trip to the Ecuadorean coast in 1921, its character as such is definitely established.

These three pottery pipes are believed to be the first ever found in Ecuador, as no specimens of this type occur in the great mass of material found at La Tolita and in the interior of Ecuador by the Mrs. Marie A. Heye Expedition, nor in the two other large archeological collections from Ecuador, namely, the Jijon y Caamaño collection in Quito, and the Rivet collection in the Trocadero Museum of Paris. This we may say is equally true of Peruvian archeological material, for it has been the writer's privilege to examine practically all of the large collections from that country, in both Europe and America. A considerable number of pipes of stone and earthenware have been found in southern Chile, Argentine, Brazil, and Venezuela, and, very

rarely, in the interior of Colombia, all of which are quite crude in execution.

The pipes in question belong to a well-defined group of artifacts found in the coast region of the Province of Manabi, north of the hills where the remarkable stone seats are found. Small, characteristic human figures of clay, well modeled, and sometimes painted in several colors, are first encountered around the Bay of Caraques, and somewhat analogous pottery objects were discovered by Dr. George A. Dorsey on the island of La Plata, a little farther south. Extending northward from Caraques into the Province of Esmeraldas as far as Atacames, this type of pottery figures abounds. Still farther north, in the great deposits on the island of La Tolita, and those discovered along the banks of the Rio Mataje on the Colombian frontier, somewhat similar figures are found, but the area of the culture seems to have been in northern Manabi and southern Esmeraldas, its center being the vicinity of the estero of Cojimies, which is the boundary of the two provinces. In Vol. II of the author's Antiquities of Manabi are illustrated a number of pieces from this territory. In the adjacent Esmeraldas region, along the coast and inland shores of Cojimies bay, numerous sites abounding in antiquities have been found by our expeditions. At the mouth of the bay is a large island with two

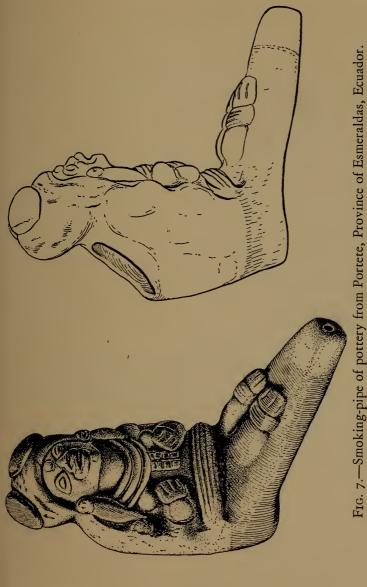


FIG. 7.—Smoking-pipe of pottery from Portete, Province of Esmeraldas, Ecuador. (Height, $3\frac{1}{4}$ inches)

small towns, the southerly being Zapotal, the northerly, Portete. It is from Portete that the two pipes obtained in 1921 were found, and we procured also other exceedingly interesting specimens to supplement a small collection gathered at the site in 1907. The character of the antiquities is unquestionably pre-Spanish, and they form a group which is of the highest archeological interest, being more allied in general concept to Central America than to the region southward. A discussion of the archeological problems of this culture area, to be presented by the writer in the next volume of the series of Contributions to South American Archeology, on the Archeology of the Province of Esmeraldas, Ecuador, and the Department of Nariño, Colombia, will summarize his investigations and studies of the entire Ecuadorean coast, begun in 1906 and concluded in 1921.

The pipe in fig. 7 is two and seven-eighths inches long at the base, and three and a quarter inches high, and the opening of the bowl is three-quarters of an inch in diameter. It represents a seated human figure with the hands placed on the body below the breasts. The legs are extended on the stem of the pipe, which projects in front of the body, the bowl being in the back. The lower part of the specimen, from the waist to half an inch from the mouth-end of the stem, is painted red on

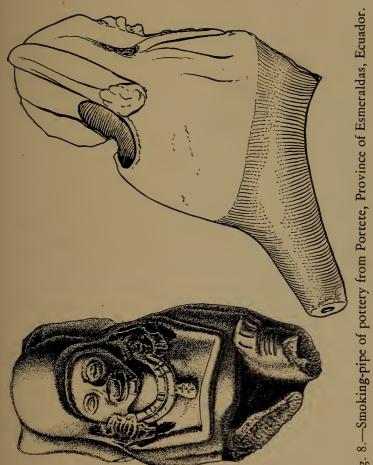


Fig. 8.—Smoking-pipe of pottery from Portete, Province of Esmeraldas, Ecuador. (Height, 3\frac{1}{4} inches)

the right side and orange-yellow on the left, the painting extending in a band around the back just above the base. The waist girdle is painted green over a yellow coating; the three-strand necklace also shows traces of green, and the top of the head is of the same color. The rosette at the right side is red, but the color has disappeared from that on the left. The long, curious éar-pendants are painted with the same colors found on the lower part of the pipe, respectively red and orange-yellow.

In fig. 8 the other pipe from Portete, three inches long and three and a quarter inches high, is illustrated. It is incomplete, as the legs of the seated human figure are broken off. The modeling is of the same character as that of the other Portete pipe, but the stem projects from the base of the back of the figure just below the bowl. The bowl of the pipe is painted in bands of green and red; the stem is green. The hands rested on the knees, and there is a two-strand necklace with pendant hanging over a short cape. The bowl of the second pipe is slightly larger than that of the first.

The third pipe to which we have alluded (fig. 9), from Agua Fria, a small site about twenty miles in a direct line north of Portete, is quite different from the two just described, in both type and modeling. It was evidently intended to hold a

wooden stem in the short stub projecting from the back. The eyes and mouth are different in character from those of the other two pipes; indeed the only point of resemblance is the turban-like covering above the forehead. The treatment of

the eyes is decidedly unlike that of the group to which the other two pipes belong, recalling some of the archaic-like faces on the necks of vessels from the region a little to the north.

Whether the pipes were used for smoking tobacco as a pastime by the people of this region may perhaps never be known; but that the custom prevailed in ancient times



Fig. 9.—Pipe from Agua Fria, Esmeraldas. (Actual size)

of smoking tobacco or other narcotics either for ceremonial purposes or for pleasure, seems to be amply verified by the three specimens above described.

M. H. SAVILLE

PRESENT-DAY PICTOGRAPHY

AN EXAMPLE of picture-writing among the collections of the Museum is of special interest in that the drawings were made and used only recently for mnemonic purposes.

Pictography as practised by the American Indians was employed principally for recording notable events, such as deeds of valor in war,—the capture of prisoners or horses, or the killing of enemies,—for success or failure in hunting, and the like. Picture-writings of this kind are often very graphic and full of action. In other cases the pictures indicate the havoc wrought by disease, or they record an unusual meteoric shower, or in fact anything that, to the artist, seemed to be of an uncommon nature.

Many kinds of materials have been used in picture-writing—skins of animals, bark, wood, stone, bone, ivory, shell, and textiles. Many choice specimens of all kinds are exhibited in the Museum. The specimen herein illustrated (pl. v), however, is nothing more than a series of drawings with a lead pencil on a piece of ordinary manila wrapping-paper. It came to the Museum from a trader who has a store at Bethel, Alaska, and an outlying post, in charge of a native, at Chookfoktolik, an Eskimo village some seventy-five miles

away. As it became necessary to replenish the stock of the post, a member of the Eskimo household was sent to the store at Bethel with the picture-writing as a memorandum of the goods needed.

The trader writes: "While traders generally could read a considerable portion of it, it was intended only as a memorandum for the carrier; it would remind him of the kind of goods wanted, while he would have to trust to his memory for the quantity and quality."

Unfortunately the trader was unable to decipher all the drawings in this case, but those whose meanings are interpretable are given in the list following, commencing with—

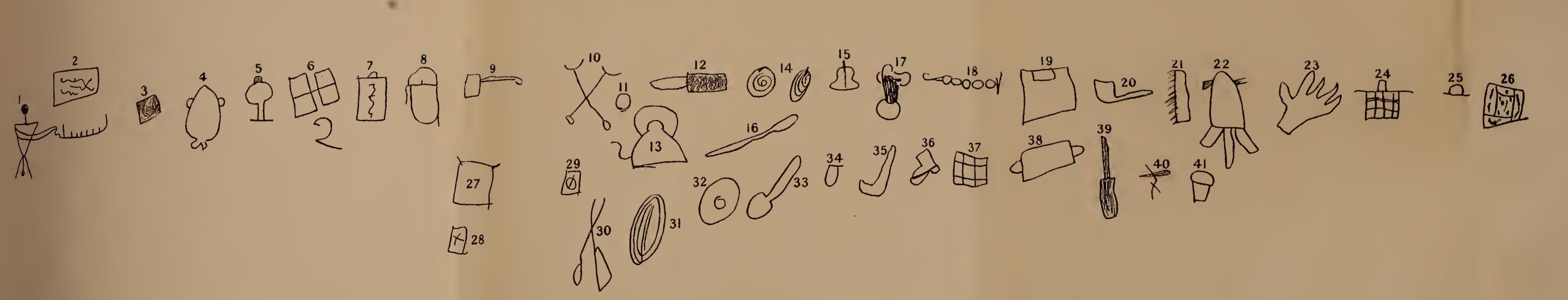
- No. 4. A *nyak*, a species of hair-seal, the skins of which are used for clothing.
 - 5. Stand lamp for coal-oil.
 - 6. Panes of window glass.
 - 7. Can of coal-oil.
 - 8. Cooking-pot.
 - 9. Camp axe.
 - 12. Sheath knife.
 - 13. Tea-kettle.
 - 14. These coil-like figures signify that "soft laid cotton twine of two different sizes were needed for net-making."

- 15. "A bell which, when in use, is attached to a dog harness or a tow-line when driving during the winter."
- 16. A file, or files.
- 18. Dog chain with a snap and a cross-bar at the respective ends.
- 20. Smoking-pipe.
- 21. Comb.
- 22. Ground-squirrel skin. "These skins are used in large numbers for clothing by the natives." The trader stated that he had "disposed of fifteen thousand of such skins in a single season, which were bartered for other and more valuable furs."
- 23. A canvas glove. "These gloves are used during the autumn and are no good for cold weather."
- 24. Cotton shirt.
- 25. Hat.
- 26. Bolt of calico.
- 27. Bolt of standard drilling for tentmaking.
- 28. "Probably intended as a reminder for some kind of cloth."
- 29. Ditto.
- 30. Shears.
- 31. Coil of line for hauling sleds, etc.



WARRANT THE WARRANT OF THE PARTY OF THE PART





A RECENT ESKIMO MNEMONIC RECORD



- 33. Spoon.
- 34. Bag of tobacco.
- 36. Shoe.
- 37. Bolt of gingham.
- 38. Cooking-pan with a handle at each end.
- 41. Five-pound pail of lard.

Some of the drawings are clear enough to convey the thoughts of the Eskimo who made them, while others are difficult to decipher. In his communication the trader states, "In all probability the drawings were made during the long evenings, the writer and the messenger going over the details carefully together, so that the messenger will know what he was expected to get and only took the writing along so that nothing should be forgotten."

In examining the kinds of merchandise specified in the pictograph, it is interesting to note how the natives are becoming accustomed to the use of the products of civilization to the exclusion of their own.

WILLIAM C. ORCHARD

WATEREE ARTIFACTS

Through the kindness of W. de F. Haynes, Esq., of New York, the Museum has received several pottery vessels of the ancient Wateree Indians who, known since 1567, lived at least as early as 1701 on the stream that bears their name near the present Camden, Fairfield county, South Carolina. The power of the Wateree was broken in the Yamasi war of 1715, and thirty years later they became consolidated with the Catawba, although they



Fig. 10.—Wateree jar from South Carolina. (Height, $18\frac{1}{2}$ inches)

still constituted a distinct village and retained their own dialect as late as 1775.

A part of the old Wateree region has been flooded in recent years by a reservoir, but while it was still exposed, Mr. Haynes was enabled to explore one of the mounds and to gather some aboriginal objects from the adjacent village-sites.

Among the more noteworthy artifacts thus procured is an earthenware jar of unusual size (fig. 10) that illustrates strikingly the ability of the Wateree potters. The entire outer surface of this vessel is covered with paddle-markings, similar to those so characteristic of the pottery receptacles of the early Cherokee.

In exploring a mound at Longtown, in the same county, a small package consisting of a bark wrapping within which was a small human figure modeled in clay, was recovered. The head was missing. The trunk is covered with a design formed by incised lines, the evident intent of the maker being to depict the ornamentation of clothing. Similar designs have been noted on certain carved stone idols from Southern mounds, but so far as known this is the first example of such ornamentation on a clay figure. This interesting object is among the collection generously presented by Mr. Haynes.

G. H. PEPPER

THE SANTA BARBARA CRANIA

THE CRANIA from Santa Barbara, Cal., about which there was so much comment in the newspapers during November and December of last year, have arrived at the Museum and been placed in the care of its Department of Physical Anthropology. After an examination of the material, the writer presents the following preliminary statement of the findings:

These skeletal remains comprise three different items, originally lettered A, B, and C, all of mature age. A consists of a number of cranial fragments, particularly of the face, blackened from smoke, ashes, and some fatty substances. B and C are skulls in a good state of preservation; they also were somewhat blackened and incrusted with earth and ashes. All the bones, on being cleaned, regained their original color, which is a dirty brownish in specimen B and light brownish in C. These skulls are shown in front and lateral views in figs. 11-14. To specimen B belong a number of other skeletal parts which will be of importance in the final investigation. With C, the notorious one, came four cervical vertebræ (I-IV) of gracile form and size. Both crania are of moderate dimensions, B doubtless a male, C quite probably a female. Both have well-preserved lower jaws.

The principal diameters of the crania are given in the following table:

Specimen	Length	Width	Height	Cranial Module
B(♂) C(♀)	174 mm. 167 mm.	141 mm. 131 mm.	134 mm. 125 mm.	149.7

According to von Török's classification, the length is to be determined as medium in B, and short in C. The cranial indices amount to 81.0 and 78.4, rendering B brachycranial and C mesocranial. B, furthermore, is hypsicranial and metriocranial, C orthocranial and metriocranial. The cranial modules are somewhat low. Of significance is the minimum frontal width of both skulls, which is equivalent to the post-orbital constriction and which causes pronounced phaenozygy. The bizygomatic width, expressing facial width, is not in excess of conditions generally found in Indian skulls, and the upper facial height is of medium extension. The accompanying table presents these measurements also in proportion to each other.

The two more important indices, the upper facial and the transversal cranio-facial, signify the two skulls as mesenic and somewhat broad-faced, expressing the typical conditions in the Indian skull.

The orbits are medium high, while the nasal aperture with an index of 45.3 is leptorrhinic in *B*, and with 53.1 chamaerrhinic in *C*.

Measurements and Indices	B (♂)	C(9)
Cranial width	141 mm.	131 mm.
Minimum frontal width	96 mm.	90 mm.
Bizygomatic width	132 mm.	130 mm.
Upper facial height	72 mm.	69 mm.
Transversal fronto-parietal index	68.1	68.7
Transversal cranio-facial in-		
dex	93.6	99.2
Upper facial index	54.6	53.1
Jugo-frontal index	72.7	69.2

Of interest is the amount of prognathism. Facial prognathism (nasion-prosthion line to eareye horizontal) amounts to 76° in B, and to 80° in C, rendering the former prognathous, the latter mesognathous, and that in spite of its apparently more protruding jaw. This condition, however, finds its expression through the angle of alveolar prognathism which amounts to only 68° in C, but to 76° in B. Flower's gnathic index expresses these conditions by indices of 106.3 in B, and 104.1 in C, signifying both specimens as prognathous.

From the viewpoint of metrical interpretation, the two skulls are to be considered as of medium to sub-medium size, with medium broad and high faces, and slightly prognathous.

From the descriptive angle it is to be stated that particularly the C specimen is of delicate texture and shape, and of postauricular development, but not exactly occipitopetal in Froriep's sense, since the expansion of the brain appears not to have taken place in a directly occipital trend, but more generally in all directions as demonstrated, for instance, by the post-bregmatic elevation. This condition causes the face to appear rather small, to which impression the alveolar projection adds. But this type of face is occasionally met with in the tribes of the Pacific coast and points to similar South Indian types (Veddah, Senoi, Singhalese). The cranial vaults are otherwise well rounded. The declination of the frontal bones upon a parallel of the ear-eye horizontal laid through the nasion, falls with 48° in B and 51° in C well into the recent range. The foramen magnum plane, too, signifies, with deviations from the ear-eye horizontal of -8° in both skulls, morphologically recent conditions.

There are two more items to be mentioned in this preliminary note. The first is the superciliary region. The arcus are in both specimens only slightly developed, representing in B stage a of



Fig. 11.—Norma frontalis of Skull B (♂). Two-fifths natural size.

Cunningham's classification, i.e., accounting for a margo supraorbitalis between the orbital rim and the sharply circumscribed arcus-elevation. In C the arcus are somewhat wider and less sharply



Fig. 12.—Norma lateralis of Skull B (&). Two-fifths natural size.

marked. The second consideration concerns the lower jaw, in which nothing extraordinary was observed. The chin development, although slight in *C*, is in keeping with the Mongoloid character-



Fig. 13.—Norma frontalis of Skull C (9). Two-fifths natural size.

istics. Most of the teeth are preserved and in good condition.

The skeletal remains from Santa Barbara, at this point of observation, do not present conditions that would justify their classification with morphologically extravagant or extraordinary types.



Fig. 14.—Norma lateralis of Skull C (9). Two-fifths natural size.

In a more extended study, based on broader comparative lines, the writer will endeavor to determine more exactly the morphological position of the Santa Barbara find.

Bruno Oetteking

A POT-HUNTERS' PARADISE

On the morning of January 12, 1924, three letters were received at the Museum that created quite a sensation. From three different friends of this institution, living in three different towns, all had the same tale to tell—the story of a most remarkable find of Indian pottery at a place called Carden Bottoms, in Yell county, Arkansas, about fifty miles up the Arkansas river, as the crow flies, from the state capitol at Little Rock.

The facts revealed by the letters were of such a nature that, although the Museum already possessed a collection from the district, it was thought best for me to make a flying trip of investigation, so I started the same afternoon.

Establishing headquarters at the little town of Dardanelle, I lost no time in locating Mr. G. E. Pilquist, who had written one of the letters, and in persuading him to guide me to Carden Bottoms. We started out in a Ford, and after about twenty-five miles' journey over roads that proved the most astonishing combination of roughness and mud, still passable, I had ever seen, we reached our destination, or rather our car bogged down in the sticky black mud and we were obliged to walk a mile or two to reach our objective.

We soon discovered that the pottery was being found in graves, not in mounds, and that these graves were scattered along on many little natural ridges forming part of the long tongue of land lying between Petit Jean creek and Arkansas river. In some places they were grouped in the form of little cemeteries, but many lay isolated.

Somehow the poor "renters"—the tenant farmers—of the neighborhood had discovered the art of probing with a steel rod in the plowed fields for these unmarked graves, had learned that they frequently contained pottery, and had found that this pottery could be sold. A miniature gold-rush resulted, and before long nearly everyone in Carden Bottoms, from small boys of eight upward, had become a "pot-digger."

As we approached the ridges the little groups of diggers made a weird picture as they toiled in the mud, unmindful of drizzling rain and flurries of snow. Crops had been poor last year, money was scarce, and so they were improving every moment of daylight. But it was sickening to an archeologist to see the skeletons chopped to pieces with hoes and dragged ruthlessly forth to be crushed under foot by the vandals—who were interested only in finding something to sell, caring nothing for the history of a vanished people. Of course, no record was kept of the burials, and any

information that might have resulted from careful work has been lost forever. Unskilled hands have probably ruined a large part of the pottery while trying to remove it from the graves, and untrained eyes have doubtless overlooked a great proportion of the smaller articles laid away with the dead.

What could I do? There was no way of stopping the wanton destruction of so much that might have been of value to science—so I made the best of it, and bought from the diggers, and from those who had financed them, such of the artifacts as I thought we needed.

I was impressed first of all by the great quantity of pottery found,—wagonloads of it, complete or nearly so,—literally hundreds of vessels of different types. Pots, bowls, jars, bottles, eccentric forms, animal and human effigies—all were well represented. Besides numerous pieces still in the hands of the finders, Mr. Pilquist in Dardanelle had a small barn full, with dozens of the best articles in his house; Mr. Camp, at Russellville, had scores of pieces; and Mr. Bailey, at Atkins, an attic full.

These collections consist mostly of plain or nearly plain pots, bowls, and water-bottles, for daily use; but there are also several different styles of decorated ware—one of them a gaudily painted variety, with scrolls, suns, and other figures in two colors (red and white) and some with three (red,

white, and black, or red, white, and brown). Then there is a type showing intricate designs engraved on the surface of the vessel after firing, and then rubbed with red paint to emphasize the patterns; a third variety is decorated with curved or angular patterns drawn with a sharp point, while the clay was still soft, before it was dried or fired; and a fourth has been painted a solid red, and fired, then portions of the surface have been scraped away, leaving a design in red standing out in bold relief. Still another method of decoration was to model the handles of bowls or the necks and bodies of bottles into the form of some animal, or of man himself.

Many of the vessels are first-class examples of the potter's art—graceful in outline, symmetrical and carefully finished, the ware thin and uniform; but others are coarser, and some are plainly the work of beginners—probably the first efforts of little girls just learning their mother's craft.

By contrast with the best of the pottery, the smoking-pipes are commonly crude—merely two hollow cones of fired clay attached at their points, at right angles, one cone serving as a bowl, the other as a socket for the stem of wood or cane, which of course has disappeared. A few show two little projections like animal ears—these are called "horse-head pipes" by the pot-hunters.

Little in the line of stone implements has been found in these graves; still a number of small arrow-points have appeared, all of one type—slender, delicate, leaf-shape, without stem or notch—many of them sharp as razors. A few flint knives, a celt-axe blade or two, a single grooved axe-head of stone, some soapstone beads, a few discs of stone, perhaps used as pot-covers, and one unique tube, carved and engraved, complete the list.

Like most tribes living along the larger rivers flowing into the Mississippi, the Indians of Carden Bottoms used many beads, pendants, and ear-ornaments made from conch-shells originating in the Gulf of Mexico and either traded in from tribe to tribe or brought up in canoes by certain Indians who made a business of this kind of traffic. Hundreds of these ornaments have been found in the graves, some of them well preserved, others crumbling through age and the action of acids in the soil where they lay.

A few awls and bodkins of various forms, and tools intended for chipping flint, all made of bone or of deer-horn, were found where they had been placed in the graves with their owners, that he or she might not lack tools to work with in the Land of Spirits; but of course the baskets, the woven sacks and garments, the bows, war-clubs, and axe-handles of wood, the rich furs of otter and beaver,

the garments of deer- and elk-skin, the head-dresses of feathers—all have disappeared without leaving a trace.

Most of the graves show no sign of trade or contact with the whites; but a few have yielded old-time glass beads and ornaments of copper wire which must have come from the stock of some white trader or early explorer. There are some copper earrings or nose-rings, however, which may be of native metal, and one crude example was found which looks like gold, but which may, when tested, turn out to be European brass.

As nearly as could be discovered by questioning the diggers in the field, some of the graves are much older than others, for, with the same conditions of soil and drainage, one skeleton might be barely traceable through decay, while its neighbor was well preserved. Probably Carden Bottoms was a place of rendezvous and burial far back in pre-Colonial times, and from then on until the coming of the whites.

Who were the Indians of Carden Bottoms? The question is difficult to answer, for the very evidence that might furnish the clue has been destroyed by the pot-hunters.

It is certain, however, that a considerable part of the pottery is typically Caddo, especially the ware engraved after firing and much of that with patterns incised before heat was applied. Another large element, dark, and not so well made, with occasional animal effigies, resembles the typical pottery of eastern Arkansas, which may be Quapaw; the painted ware may belong to this group, and it may not,—the exact connection has not yet been satisfactorily worked out. Certainly the impression produced by the Carden Bottoms collection as a whole is that it was made by at least two or perhaps three separate peoples.

Careful work would have proved or disproved the possibility of this, and very simply. If some graves contained only Caddo pottery, others only painted ware, and still others only ware of the eastern Arkansas type, we might hope to show occupancy by three different peoples; but if all classes of pottery are usually found together in the same grave, there would be ground for assuming that one people of mixed culture had lived in Carden Bottoms.

The thanks of the Museum are especially due to Mrs. Ruby Erwin Livingston of Russellville, to Rev. H. E. Wheeler of Little Rock, and to Mr. G. E. Pilquist of Dardanelle, for their kindness in bringing the finds to our attention, and for their assistance to the writer while in Arkansas.

M. R. HARRINGTON

OBJECTS ILLUSTRATING YUROK ETHNOLOGY

A COMPREHENSIVE collection of ethnologic objects from the Yurok tribe of lower Klamath river in northern California has recently been acquired by the Museum through the generosity of Harmon W. Hendricks, Esq., Vice Chairman of its Board of Trustees. This collection, consisting of 331 objects, represents the result of five years' gathering among the Yurok by Miss Grace Nicholson, of Pasadena, California.

Especially interesting are the complete sets of costumes and the feather head-dresses used in the White Deer dance, the Brush dance, and the Jump dance. The fine technic of the featherwork is enhanced in beauty by the artistic color combination of red woodpecker scalps and other brilliant feathers contrasted with the strips of white deerskin with which these objects are decorated. Headbands are made of feathers and of walrus tusks. The necklaces consist of juniper-seeds and of engraved dentalium shells. Two albino deerskins, beautifully decorated on the head and along the front legs with basketry ornaments, trimmed with red woodpecker scalps and strips of deerskin, were used in the White Deer dance. There is also a complete set of feathered dance wands, comprising ninety-five varieties, usually worn in the hair, but sometimes carried in the hand. Some of the hand wands are provided with an obsidian or a flint point attached to the end of a wooden staff which is adorned with spiral painting and bunches of feathers.

The collection contains also many fine, large obsidian blades. Four of the black ones, which are carried by the leader of the White Deer dance, range from nineteen to twenty-two and a quarter inches in length, while two blades of red obsidian measure respectively nine and a half and sixteen and a quarter inches.

Besides the objects designed for use in ceremonies, there are many of a utilitarian character, such as stirring paddles, bowls, iris-fiber cords, net meshers, and wooden and elkhorn spoons. There are also tubular pipes of stone and of wood, some of which were used in dances.

During the last five years Miss Nicholson has visited the Yurok from time to time with a view of procuring ceremonial pieces and other objects, and in the summer of 1923 she was afforded the opportunity of studying some of their rites. After acquiring the dance paraphernalia, Miss Nicholson was asked by the leaders of the tribe to lend the articles to them for a final dance, as not enough of the old ceremonial pieces remained in the tribe for

this purpose. After consenting to the loan she was able to view the dances and to make some extremely interesting photographs of them. These photographs are now deposited in the Museum.

GEORGE G. HEYE

MAYAN SCULPTURE FROM WESTERN GUATEMALA

Sculpture in stone of a high order is not commonly found in the area of Mayan culture in western Guatemala. Most of the stone idols and other carvings from that region are distinctly inferior in execution to the splendid products of the stone carver's art found in the ruins of Quirigua and Copan, as well as in other so-called old-empire cities. The unique sculpture illustrated in fig. 15, which is four feet, nine and three-quarters inches high and slightly more than two inches in thickness, is the most interesting specimen of carving thus far found in the country of the Quiche, the branch of the Mayan family inhabiting the region to the west of the area of the old-empire cities. It was collected by Mr. Harry F. Bird in 1916, and is a gift to the Museum by Rodman Wanamaker, Esq. The sculpture was seen by the writer in Guatemala City in 1915, when he was told that: it had been discovered in Santa Cruz Quiche, Department of Quiche.



Fig. 15.—Mayan sculpture from western Guatemala.

Santa Cruz Quiche is the modern town built by the Spaniards near the site of Utatlan, the capital of the native chieftains Quiche at time Pedro de Alvarado conquered the country just four centuries ago (1524). It was a fortified city in the sense that it was surrounded by a deep barranca, so that the two narrow roads of approach could be easily defended from invaders by a comparatively small The force.

ruins of Utatlan have been described by Stephens in his Incidents of Travel in Central America, Chiapas, and Yucatan.

The idol in question, of a type hitherto not found in the Mayan region, has a long shank with

a block-like base undoubtedly designed to allow it to be embedded upright in the ground. The back is not carved, and the front shows a

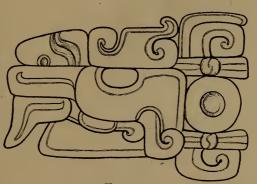


Fig. 16.

complicated and highly conventional representation of a serpent, in the middle portion of which is the mask of a deity (fig. 16), which may be identified with certainty as God B of the Mayan pantheon. Shown in fig. 17 is a representation of this god sitting in or issuing from the open mouth of a serpent. In fig. 18 only the mask of the deity is shown in the open mouth. Both illustrations are from the Dresden Codex. This deity is generally considered to be Kukulcan, the Feathered Serpent God, the equivalent of the Nahuan Quetzalcoatl. Other students, notably Dr. D. G. Brinton, believe that the God Itzamna is represented. The character-



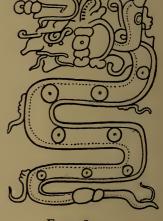


FIG. 17.

Fig. 18.

istic feature is the long nose, with a curled object on the top, and a somewhat similar object, perhaps a tooth, projecting backward from the mouth. Its association with the serpent would seem to be sufficient to identify this god with Kukulcan, but the general problem is too involved to admit of positive identification without more material for study than we have at present. The sculpture reveals greater proficiency in stone-carving among the Quiche than we had heretofore suspected, and in its general treatment shows closer analogy with the style of representation of this particular deity in the Dresden Codex than in the sculptures of the old-empire cities.

M. H. SAVILLE

ESKIMO OBJECTS FROM ALASKA AND ST. LAWRENCE ISLAND

Among the collections recently acquired by the Museum is a series of Eskimo objects from points on the Alaskan coast of Bering sea and from St. Lawrence island. This interesting material was procured from Captain Joseph Bernard, who commands the schooner *Teddy Bear*, operating out of Nome.

The collection consists principally of ethnological specimens from the Tikeramiut, who live in the vicinity of Point Hope, Alaska, from which point they receive their name, 'people of the fore-finger.' Many of the objects in this group were undoubtedly picked up on the large ancient village-sites in the vicinity, and were repaired and used by the present inhabitants. The semilunar knives with blades of slate and of jadeite, and the stone-pointed drills, are especially good examples of the secondary use of such implements.

When his schooner was blown from its course last summer, Captain Bernard was forced to take shelter in the lee of St. Lawrence island, and while there collected a few ethnological objects of the Yuit Eskimo, which supplement those of the Liebes collection mentioned in the initial issue of this publication. Noteworthy among the later acquisition

is a net made of narrow strips of whalebone, used for capturing the sea-birds locally known as crowbills, which are attracted by means of live decoys fastened by their beaks to a long line under the net. Other interesting objects in this series are a seal sled, a root-digger, and two native fish-nets, one of which is a circular dip-net made of whalebone, used for capturing small fish in seal-holes.

Several exceptional ethnological objects were obtained also from the Eskimo on Point Lay, including a hammer of pectolite. This implement, being a family heirloom, was highly prized by its owner.

The archeological specimens in the collection were found by excavation on Icy Cape, and in the town of Talla, near Port Clarence. Of this material perhaps the most interesting objects are some very old blue-glass beads, and an adze with a jadeite blade.

D. A. CADZOW

RECENT ACCESSIONS BY GIFT

Since the report of accessions to the Museum by gift during November and December, 1923, published in the initial number of Indian Notes, friends of the Museum have enriched its collections by generously presenting the following objects:

From Mr. Marion Eppley:

Pottery jar. Catawba, North Carolina.

From Mr. John W. Reamer:
Grooved stone adze. Village of Echo Lake, Passaic county, N. J.

From Mrs. John Jay White:

Earthenware jar. Acoma, New Mexico.

From Mr. Frank Wood:

Cylindrical basket and cover. Aleut.

From Mr. Rudolph Kersting:

Stone pipe with group of human and animal figures. Probably Iowa tribe.

From Lieut. G. T. Emmons: Snow knife. Eskimo.

From Mrs. Thea Heye:

Goat-horn spoon. Haida.

Basketry shot pouch. Tlingit of Hoonah, Alaska.

Ivory charm representing a bear and a lizard, and a similar charm representing a crab. Kwakiutl, British Columbia. Blanket. Saltillo, Mexico.

Shell pendant inlaid with turquois and lignite. Queres of San Felipe pueblo, New Mexico.

Very large storage-basket. San Carlos Apache, Arizona. Shrunken human body. Jivaro Indians of Tena, Oriente, Ecuador.

From Mr. Peter T. Sharp:

Infant's moccasins, given to Sarah Sharp by Long Island Indians about seventy years ago.

From Mr. Prescott Van Wyck:

Effigy jar from the coast of Peru. Said to have been dug up in New Jersey.

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From Mr. D. L. Shoemaker:

Fifty-four arrowpoints. Falls Church, Virginia.

Stone axe. Fernandina, Florida.

From Mr. Howard P. Bullis:

Fifty-four arrow and spear points and knife blades, 5 celts, 2 net-sinkers, and a hammerstone. Canarsie, Long Island, N. Y.

From Mr. Herman Schweizer:

Two ancient sacrificial cane cigarettes. Southern Arizona.

NOTES

THE METAL EFFIGY PIPE.—As a result of Mr. Pepper's illustrated description of the metal effigy pipe found at White Springs, near Geneva, Ontario county, New York, which appears in the initial number of Indian Notes, a communication has been received from Dr. William G. Hinsdale, of Syracuse, in which he mentions that the farm at White Springs "was owned by a Mr. Lee, who before his death in 1841 did considerable grading in front of his house and at that time dug up many skeletons, with axes, rings, medals, crosses, and pipes. One of these [pipes] is mentioned as being of lead, with a panther on the front of the bowl, looking into it. The stem, broken, is yet eight inches long. Perhaps this is the same pipe. The cemetery was only partially disturbed, and the many hillocks and depressions indicate this." From this information it would seem that the pipe now in the Museum is identical with the one which Mr. Lee found nearly a century ago.

TSIMSHIAN HEAD-PIECE.—An exceptional head-piece of wood (fig. 19), carved to represent a mythical mountain bird, has been acquired from the Tsimshian Indians of Port Simpson, British Columbia. This object was the house-crest of a family piece worn on ceremonial occasions and was highly valued. Owing to its size, and because if solid its weight would have made it impossible to wear, the head-piece was lightened by hollowing out the back and covering the space with hide.

LARGE STEATITE TUBE.—A fine steatite tube, noteworthy by reason of its unusual length of sixteen and a half inches, has recently been acquired for the Museum by Mr. E. H. Davis. This tube was found about seventeen years ago by a Luiseño Indian in a mountain cave near the Rincon reservation, San Diego county, California, and it has long been in use for bringing rain. Collected also by Mr. Davis for the Museum is a perforated heating stone of steatite, likewise used by the Luiseños.

Emmons Jade Collection.—The important collection of aboriginal jade objects from British Columbia and Alaska, gathered by Lieut. George T. Emmons, U. S. N., during many years of study of the tribes of those regions and deposited by him for exhibition in the Museum, has been acquired by the Museum and now forms a part of its perma-



FIG. 19.—Wooden head-piece of the Tsimshian.

(Height, 22½ inches)

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nent collections. These objects are described, and illustrated largely in color, in *Indian Notes and Monographs*, Miscellaneous No. 35.

The DEMAND for photographs of objects in the Museum has increased to such an extent that it has become expedient to make a nominal charge of twenty-five cents for each print whenever it is necessary to make a negative for the purpose. If, however, negatives of specimens are already in the collection of the Museum, no charge will be made for a reasonable number of prints, provided they are desired to promote the study of archeology or ethnology and are not designed for commercial purposes.

AN INTERESTED visitor to the Museum in January was Mr. William H. Jackson, of Detroit, formerly photographer of the United States Geological and Geographical Survey of the Territories (the "Hayden Survey") and the author of three papers on the archeological remains of the San Juan watershed of Colorado, Utah, and Arizona, examined by him nearly half a century ago.

THE ETHNOLOGICAL material in the Museum pertaining to the Aleut has recently been examined by Dr. Waldemar Jochelson, who is preparing a monograph on that people for the Carnegie Institution of Washington.

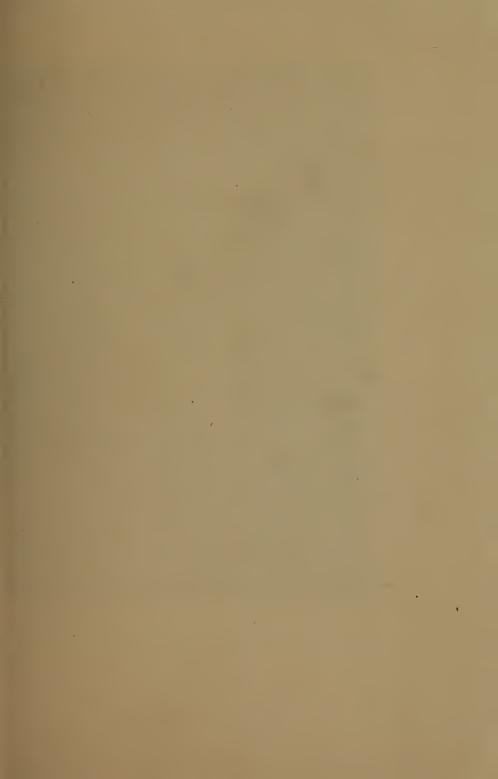
A POPULAR account of the work of the Ozark expedition in 1922-1923, in charge of Mr. Harrington, appears under the name of Mr. Cadzow in the February issue of *American Forests and Forest Life*, published in Washington.

On the evening of February 12 a view of the second half of the motion-pictures illustrating the activities of the Zuñi Indians of New Mexico, made by the James B. Ford Expedition in the summer of 1923, was given at the Museum for the benefit of its employees. Subsequently the pictures were displayed at meetings of the American Ethnological Society and the Explorers Club.

MR. FOSTER H. SAVILLE lectured on Wampanoags and Narragansetts before the Park Museum of Providence, Rhode Island, on March 9.

DR. HERMAN F. TEN KATE has reviewed a number of the more recent publications of the Museum in *Tijdschrift van het Kon. Nederlandsch Aardrijkskundig Genootschap*, of Leiden, Holland.

Through the kindness of the author, the Museum is the recipient of a copy of Hunting with the Bow and Arrow, by Saxton Pope (San Francisco, 1923). In this book is preserved, in popular form, the story of Ishi, the primitive Yana Indian of California, who was found by representatives of the University of California in 1911 and was the subject of anthropological study until his death five years later.





GEORGE HUBBARD PEPPER February 2, 1873–May 13, 1924

Published Occasionally in the Interest of the Museum of the American Indian, Heye Foundation, Broadway at 155th Street, New York

Vol. I

JULY, 1924

No. 3

George Hubbard Pepper

IN THE passing of George Hubbard Pepper at Roosevelt Hospital, New York City, in the morning of May 13, the Museum has suffered the loss of one who had been longer associated with the Director in his endeavors to bring together the collections that formed the nucleus of the Museum than any member of its scientific staff, while to the Director himself Mr. Pepper's death is not alone that of an associate, but of a staunch and gentle friend.

Mr. Pepper was born at Tottenville, Staten Island, February 2, 1873, and from boyhood evinced a keen interest in American archeology, inspired by the presence of sites of Indian occupancy in the immediate neighborhood of his parental home. After his graduation from the local high-school in 1895, he was encouraged by the late Prof. F. W. Putnam to undertake special studies at the Peabody

Museum of Harvard University, remaining in Cambridge for that purpose during the winter of 1895-96. In 1896 he was appointed assistant curator of the Department of the Southwest in the American Museum of Natural History, from which time until 1900, during the summer months, he was in immediate charge of the excavation of the prehistoric ruin of Pueblo Bonito in Chaco cañon, New Mexico, conducted under the Hyde Exploring Expedition, the results of his observations in that interesting field being published in 1920 by the American Museum.

In pursuance of his ethnological studies, Mr. Pepper made a reconnoissance of all the occupied pueblos of the Southwest, in 1904, at the same time continuing a study of the technique of Navaho weaving, commenced while he was engaged in the Pueblo Bonito exploration. Retaining his position in the American Museum, Mr. Pepper later in the same year conducted excavations in the yacatas of the Tierra Caliente of Michoacan, Mexico, in the interest of what had become known as the Heye Museum, and in 1907 he accompanied Prof. M. H. Saville, of Columbia University, on an expedition for the same Museum, whose object was the elucidation of certain archeological problems in the Province of Manabí, Ecuador.

In 1909 Mr. Pepper severed his connection with the American Museum and was appointed assistant curator in the Department of American Archeology in the University Museum at Philadelphia, a position which he retained until the following year, when he became permanently attached to the force of workers which the writer had enlisted for building the collection that developed into the Museum of the American Indian, Heye Foundation.

Mr. Pepper devoted his entire service to the interests of this institution until the end. In 1914, in conjunction with the Director, he excavated a Munsee cemetery of the historic period near Montague, New Jersey, the results of which have been published by the Museum. In the following year he was associated with the Director and Mr. Hodge in the exploration of the Nacoochee mound in the old Cherokee region in Georgia, the results of which have likewise been published by the Museum. In 1918 he returned to the Pueblo field in New Mexico to aid in the Hawikuh investigations of the Hendricks-Hodge Expedition of the Museum. In all of his field work Mr. Pepper exhibited punctilious care and ability, and his notes were always models of detail and completeness.

During the last few years, as other duties permitted, Mr. Pepper devoted much attention to the elaboration of his studies of Navaho weaving,

commenced many years before, the basis of his research, to a considerable extent, being a collection of Navaho textiles which he had gathered from time to time, and which ultimately was acquired by the Museum. The result of these final studies is an extended memoir on the subject which will be published under the imprint of the Museum.

Mr. Pepper was a founder of the American Anthropological Association, a fellow of the American Association for the Advancement of Science and of the American Ethnological Society of New York, a member of the American Folk-Lore Society, and a corresponding member of the Academia Nacional de Historia of Ecuador. His published writings are:

Ceremonial deposits found in an ancient pueblo estufa in northern New Mexico. *Monumental Records*, vol. 1, New York, July, 1899.

The Navajo Indians. Southern Workman, Hampton, Va., 1900. The Navajo Indians, an ethnological study. The Papoose, vol. 1, No. 1, New York, December, 1902.

The making of a Navajo blanket. Everybody's Magazine, New York, January, 1902. (Translated and published under the title next following.)

Die Deckenweberei der Navajo Indianer. Globus, Band LXXXII, Nr. 9, Braunschweig, September 4, 1902.

The ancient basket makers of southeastern Utah. American Museum Journal, vol. 11, no. 4, Suppl., New York, April, 1902.

Native Navajo dyes. The Papoose, New York, February, 1903. The throwing-stick of a prehistoric people of the Southwest.

Proceedings of the Thirteenth International Congress of Americanists, 1902. New York, 1905.

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- Ceremonial objects and ornaments from Pueblo Bonito, New Mexico. American Anthropologist, N. S., vol. VII, no. 2, Lancaster, Pa., April-June, 1905.
- Human effigy vases from Chaco cañon, New Mexico. Boas Anniversary Volume, New York, 1906.
- An Hidatsa shrine and the beliefs respecting it, by George H. Pepper and Gilbert L. Wilson. Memoirs of the American Anthropological Association, vol. 11, pt. 4, Lancaster, Pa., 1908.
- The exploration of a burial room in Pueblo Bonito. Putnam Anniversary Volume, Cedar Rapids, Iowa, 1909.
- Costa Rica. In "Notes concerning new collections." Anthropological Papers of the American Museum of Natural History, vol. 11, pt. 3, New York, April, 1909.
- Exploration of a Munsee cemetéry near Montague, New Jersey. By George G. Heye and George H. Pepper. Contributions from the Museum of the American Indian, Heye Foundation, vol. 11, no. 1, New York, 1915.
- The Museum of the American Indian, Heye Foundation. Geographical Review, vol. 11, no. 6, New York, December, 1916.
- Yacatas of the Tierra Caliente, Michoacan, Mexico. Holmes Anniversary Volume, Washington, 1916.
- The Nacoochee mound in Georgia. By George G. Heye, F. W. Hodge, and G. H. Pepper. Contributions from the Museum of the American Indian, Heye Foundation, vol. IV, no. 3, New York, 1918.
- Our economic debt to the Indian. World Outlook, 1918.

stone effigy pipe from Kentucky. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation, vol. x, no. 1, New York, 1920.

Pueblo Bonito. Anthropological Papers of the American Museum of Natural History, vol. xxvII, New York, 1920.

A wooden image from Kentucky. *Indian Notes and Monographs*, vol. x, no. 7, New York, 1921.

Metal effigy-pipe from New York. Indian Notes, vol. 1, no. 1, New York, January, 1924.

Wateree artifacts. Ibid., no. 2, April, 1924.

A strange type of pottery from Utah. To appear ihid., no. 4, 1924.

GEORGE G. HEYE

SNAKE-PENS AT HAWIKUH, NEW MEXICO

During the excavations at Hawikuh by the Hendricks-Hodge Expedition of the Museum, there were uncovered three strange pen-like structures whose function at first was problematical, although it seemed evident that they were built for the purpose of keeping in confinement some kind of living



Fig. 20.—Snake-pen beneath the western refuse-heap of Hawikuh. creatures. These little enclosures were rectangular, and rose 1 ft. 6 in. to 2 ft. 1 in. from the floors of the houses in which they were built. In each case the pen was of neat stone masonry, plastered with adobe mortar and roofed with small poles covered with adobe.

The first of the enclosures was unearthed in 1917 beneath the great refuse-heap at the western slope of Hawikuh, about fourteen feet beneath the surface. It was in a more or less disintegrated condition, and only traces of the tiny roof-sticks, laid at fairly regular intervals, remained. The construction was peculiar, the only substantial part



FIG. 21.—Another view of the snake-pen beneath the western refuse-heap.

being the front or northern masonry wall, the other sides consisting of thin stone slabs set on edge. The northern wall extended westward beyond the western slab side, then turned southward, paralleling another north-south wall with which it formed a passage-like way that, open at its

northern end, terminated at the southern extremity in a slightly elevated rectangular structure which had supported a thin, ring-like pot-stone (fig. 20-22). The room in which this pen had been built was not completely excavated, but enough of it

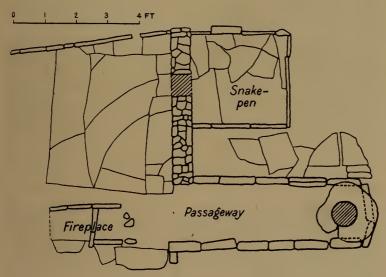


Fig. 22.—Ground-plan of the snake-pen and its surroundings beneath the western refuse-heap.

was exposed to show that it had been neatly paved with flagstones and had been provided with two adjoining fireplaces, one of which, however, evidently had been abandoned before the other. The pen was approximately 1 ft. 6 in. square, and about the same in maximum height. In the wall forming its northern side was a tiny doorway, $4\frac{1}{2}$ in.

wide by 6 in. high, cut in a single slab that did not extend through the wall. The sides of this aperture were worn smooth as if by constant use.

The other two pens were found in the course of the field-work of 1923 in the lower level of the deep, ancient chamber known as Room 392, on the eastern side of the ruin. This room had long been abandoned and filled with refuse, and other rooms built over it in later times, as shown by the associated pottery. The little enclosures were built against the southern wall of the chamber and were roofed with poles covered with adobe plaster in much the same manner as the one above referred to; but the masonry walls were more substantial and the doorways larger.¹

The roof of the eastern pen (shown at the left in fig. 23) was still intact, although it had sunk considerably, and the stone lintel of the little doorway had broken and fallen, carrying with it the masonry above. The substantial walls of both the enclosures were thinly plastered, whereas the plaster of the room walls was rather heavy, and

¹ The outer wall of the two pens was 1 ft. 8 in. to 2 ft. 1 in. high, and 11 in. thick, or the same thickness as the average house walls. The doorways of the pens measured approximately 1 ft. 4 in. wide by 1 ft. high, but that of the western pen had been partly sealed with masonry. The approximate inside measurements of the eastern pen were: N. wall, 3 ft. 10 in.; S. wall, 4 ft. 4 in.; E. wall, 3 ft.; W. wall, 2 ft. 5½ in.; and of the western pen (disregarding the later bin partitions), about 2 ft. by 4 ft.



Fig. 23.—Snake-pens in Room 392 of Hawikuh. The line of the roof of the pen at the left may be seen against the room wall.



Fig. 24.—The snake-pens in Room 392 and a portion of the house floor.

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showed that the pens had been built against it, rather than at the time the house was erected. The floors of the pens were of ordinary earth, and extended slightly below the level of the room floor, which was of smoothly plastered, hard adobe



Fig. 25.—Bowl decorated with macaws and butterflies in green glaze and mat red. (Diam., $7\frac{1}{2}$ inches.)

(fig. 24). It was quite evident that the western pen had been built for the same purpose as the other, but the roof of its western half had subsequently been removed and that portion formed into small

bins by means of masonry partition walls. These partitions are not shown in the present illustrations.

Mingled with the refuse that filled the eastern pen were many bones of small birds and mammasl, a sherd of a vessel of Gila Valley ware and another of Sikyatki type (both of which classes of earthenware appeared at Hawikuh early in its history),2 and two grooved mauls. In the other pen, in addition to similar bones, there were recovered an almost entire bowl painted in mat white, decorated in green glaze and mat red, the decoration consisting of seven macaws and two double butterflies (fig. 25, 25a); also a small stone mortar somewhat stained by red paint. Both of these receptacles were inverted on the bottom of the enclosure. The Zuñi workmen insisted that the pottery vessel was designed for use as a medicine-bowl, and that the mortar was employed for mixing paint for prayersticks. The bowl belongs to Type III of the pottery found at Hawikuh.3

Notwithstanding the suggestion offered by the finding of the bowl with the painted macaws in the western enclosure, supplemented by native belief, it would have been impossible to keep in confinement for any length of time, in a room almost

3 Ibid., p. 11.

² See Indian Notes, vol. 1, pp. 8-15, Jan. 1924.

totally dark, birds of this or of any other kind, although there is no question that the Zuñi of Hawikuh possessed macaws, as was shown by their burial beneath the floors of early domiciles. It



Fig. 25-a.—The decoration on the bowl. The black lines represent the green glaze; the hachure lines, the mat red.

was therefore difficult to conceive the purpose for which these peculiar structures were intended, until the writer recalled a statement by Fray Estevan

de Perea in his Verdadera Relacion de la Grandiosa Conversion que ha avido en el Nuevo Mexico (Sevilla, 1632), referring to the Province of Zuñi, that "here they (the Spaniards) saw a notable thing; and it was some enclosures of wood, and in them many rattlesnakes that, vibrating their tongues, giving hisses and leaps, are menacing as the fierce bulls in the arena. And (our men) desiring to know the object of having these serpents imprisoned, they told them that with their venom they poisoned their arrows, wherewith the wounds their opponents received were irremediable." 4

It therefore seems most reasonable that a custom practised by the Zuñi of Hawikuh in the early part of the seventeenth century should have extended back to prehistoric times, and that the enclosures of masonry were employed in earlier years for the same purpose as those of wood which the companions of Perea saw in 1629.

F. W. HODGE

^{4 &}quot;Aqui vieron una cosa notable, y fue, unos cercos de madera, y en ellos muchas Bivoras que bibrando las lenguas, dando sylvos, y saltos, estan amenazando como el bravo Toro en el coso: y queriendo saber el fin de tener encarceladas estas sierpes, les dixeron, que con su veneno atosigavan las flechas, con que eran inremediables las heridas que recibian sus contrarios." See translation in Land of Sunshine, vol. xv, no. 5, Los Angeles, Nov., 1901.

ARIKARA FISH-TRAP

The Arikara fish-trap which forms the subject of this article was made, and the information respecting it was furnished, by White-Bear, who was ritualistically authorized to make and use it according to ancient custom. None but those who had purchased the right and had learned the ritual might have presumed to construct and set a fish-trap, but it is true that at the present time some young men of modern thought build and operate fish-traps for practical purposes. In constructing such traps they use materials most conveniently at hand—for example, binding twine instead of rawhide thongs for making the panels of pickets.

The fish-trap (see the illustrations) is a circular pen made in four panels of sandbar willow attached to four posts, and a detached gate made from twelve sandbar willows the same as the panels. Each of the four panels consists of one hundred sandbar willows. These willow sticks, both of the panels and of the door, are sharpened at the lower end in order that they may be thrust into the sand of the river-bed and made firm in a circular form like the ground-plan of the Arikara dwelling and of the medicine-lodge.¹

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¹ The term "medicine-lodge" is the ordinary white man's designation of the structure and insitution, which is in effect the tribal temple.

The four posts supporting the four panels of the trap are referred to the four main posts of the dwelling and of the medicine-lodge. In the center of the circular pen was placed a cottonwood sapling with the twigs and leaves left at the top. This central sapling is referred to the fireplace of the Arikara dwelling, and more particularly of the medicine-lodge. The four main supporting posts of the circular pen may be of any suitable hard, firm wood, such as ash. No species is prescribed; but the poles or stakes used in making the panels and the door must be of sandbar willow. The cord used to weave the panels and the door must be of buffalo rawhide thong, but of course thongs of domestic cowhide had to be substituted when buffalo-hide could no longer be had. The bar used to fasten the door when closed must be of Juneberry wood (Amelanchier alnifolia). Arikara informants offered the opinion that the Juneberry was prescribed by the ritual because its fruit was so important a part of the Arikara commissary. The sapling in the center of the pen, correlated with the fireplace of the house or temple, must be a young cottonwood tree, the cottonwood being one of the species of trees having sacred and mystical significance.

Outside the circle of the fish-pen are four other strong stakes which serve to give support and firm-

ness to the panels. No particular species of tree was prescribed for this purpose.



Fig. 26.—Diagram showing the position of the fish-trap in the stream.

Of the four panels of the fence, it will be noted that one has a number of the palings cut shorter than the others. When set up, these shorter palings make a gap over which the operator can step into and out of the pen.

When a fish-trap is to be set up, a place is chosen in a backwater or eddy beside the main current of the stream. First, the four main posts are set where the trap circle is to be. These, as said before, refer to the four main posts of the medicine-lodge,

and, having been set, the four panels are next placed, extended each in a segment of a circle from one of the four posts to the next, the panel

with the before-mentioned gap made by shorter palings being set next to the shore. The four outside supporting posts are next set. These are forked. The young cottonwood sapling is cut and brought for the center-pole of the pen; this sapling is twelve to fifteen feet high, and has its branches trimmed off except at the top, as mentioned. The twigs and leaves at the top are left for the purpose soon to be explained. Now, the pen being erected, a bunch of *Artemisia gnaphaloides* is attached to each of the four main posts and one on each side of the door.

Five pieces of bait are placed, one tied to the sapling in the center and one to each of the four supporting posts. The bait preferred is maggoty meat. A screen of sandbar-willow twigs with the leaves left on is placed along the down-stream side of the pen to catch the floating maggots and to cause them to float away through the open door of the trap down-stream, and lure the fish through the door. As the fish swim about the trap on the lower side, they find the open door and enter. The pieces of bait for the four main posts are tied on thongs which have each a noose in the end to drop over the fork of the outside supporting post, so that it can be quickly lifted, and that on the cottonwood sapling at the center is tied with a knot easily slipped, in order that all the pieces of bait

may be readily and quickly removed when the operator enters to take out the fish which have been caught.

If a man wishes to have a fish-trap set up, and does not himself know the ritual or possess the



Fig. 27.—Arikara fish-trap. Shutting the gate of the trap.

ritualistic authority to do so, he goes to a man who has this knowledge and authority, and engages to pay him the proper fees to have the work done. Having the necessary knowledge and ritualistic authority to make the trap, a man goes about it

seriously and thoughtfully. He must give his mind to the task; he must think of the goodness and greatness of Providence, especially of the ways of the living beings in the river, the fishes there; he must refrain for the time from any connection with a woman; he must have his mind quiet and clear of doubt and anxiety; his heart must be free of malice and of any grudge against anyone; hold no ill-will and no anger. As he works on the gathering of the materials and the construction of the parts of the trap, he puts the power of his good thoughts into his work and impregnates with them the trap which he is building. He does not think of the trap as a device by which he is to deceive and outwit the fish, but as a divinely appointed means by which, if he faithfully does his part, Providence will give to him the fish which he needs for his food and for the food of his kinsfolk and friends.

The fish most commonly impounded in the trap is the catfish, though sometimes other species are caught, they say. They also say that if fish of one species go into the trap, other species will stay out.

The time of first setting a trap for catching fish is the time of new corn, roasting-ear time. The use of the fish-trap may continue until the water becomes uncomfortably cold for the work, prob-



FIG. 28.—Bundles of Artemisia, and packages, one containing tobacco and the other Actaea.

ably about the middle of August or soon after, for on the upper Missouri, in the Arikara country, the nights begin to have a cold edge as early as August.

When a fishing project is undertaken, the trap is constructed as before described: A site is selected in which to set it in an eddy at the edge of the strong main current, and a sheltered place in the bushes back a hundred yards or so from the river-bank is chosen for the camp of the operator and his assistant. A pit is dug in the sandy bank a dozen feet or so from the shore in which to hold the fish when caught. This is made large enough to contain all the fish they may catch, and deep enough to prevent them from jumping out and escaping into the water.

An offering is made ready to propitiate the fish spirit in the river. In old times this would be painted robes, or robes decorated with porcupine-quillwork, or moccasins, necklaces, or any other valuable objects of native manufacture, and a small pouch of tobacco of the species Nicotiana quadrivalvis, cultivated from time immemorial by the Arikara. In modern time this one requisite remains unchanged, but the other gifts may be and commonly are commuted to pieces of cloth or calico which can be bought from the white trader. Beef heads or other suitable pieces of spoiled meat are sought, and brought to the vicinity of the trap and laid on the bank till wanted.

The bunches of Artemisia gnaphaloides are gathered and made ready, one for each panel of the pen, one for each door-post, and one for use by the operator in cleansing himself as he leaves the pen. There is also provided a quantity of the boiled and dried root of Actea arguta Nutt., which is the



Fig. 29.—The fish-trap set and baited; the door open for fish to enter.

proper medicine to apply as a remedy for the poison if the operator or his assistant should be stung by a catfish.² In case of such poisoning, some of the root is chewed and put upon the wound, together

² The Arikara name of the "fish medicine" (Actaea arguta Nutt.) is škánskátst.

with the chewed bark of young sandbar-willow sprouts. At the same time a finger is inserted into the mouth of a catfish and some of the slime therefrom is wiped out and also applied to the wound. But if, in their preparation, the men have adhered to the prescribed rules of abstention, it is said the fish will never harm them. On the other hand, it is said that if a man has disregarded the rules, the fish will be very angry and he will be unmercifully stung. It is told of a certain Arikara, at the present time living on the reservation, who, being skeptical, disregarded the warning given him in regard to the necessary proper preparation, and insisted on going into the pen to dip out the fish. The fish were stirred up and he was painfully stung. He hurriedly got out of the pen, retired to the camp, and lay down by the fire; but the pain and the swelling from the wounds increased, and he called for the operator who had a right to administer the medicine, confessed his fault, and asked to be relieved, giving his pledge for the proper fees. The medicine was applied and he was relieved of his pain.

All being ready, the pen is set up; the four panels are strung out in a circle attached to the four main posts, the outside support posts are placed, and the central cottonwood sapling is set. The operator goes entirely round inside the circle of the pen,

testing the firmness of the setting, feeling the bottom of the palings with his toes. In all his operations the operator of the trap wears only a breechcloth. Having firmly set all the panels, he attaches to each a bunch of Artemisia gnaphaloides, and a bunch to each of the two door-posts. Now he makes another circuit of the pen, throwing water with his hands over all the pen to cleanse it of his own presence. Then he steps out over the gap of the fence on the shoreward side. He picks up the sandbar-willow pole to which he has attached his offering for the fish spirit in the river. This offering he now carries up-stream to a jutting point above the fish-trap. Here he stands, facing the current of the stream, and makes an invocation to the spirit to have pity on him, to receive the offering which he makes, to be kind to him, and to grant him a generous catch of fish to supply his need.

He now goes back to the camp he has made in the bushes for a little rest and refreshment, for by this time it is evening. His assistant has prepared a meal, which they now eat. It is now dusk. After they have filled and lighted and offered the pipe, and have smoked, the operator goes carefully and quietly to the high bank above his fish-trap. There he settles himself, wrapped in his blanket (in his buffalo-robe in old time); he waits and

watches with patience under the torment of the mosquitoes and the gathering chill of the night. He is alert to all the signs of night-life about him. He can see little, for it is dark; but he hears the sounds made by the fish leaping in the river before him, and by the owls in the timber back of him, the mice and other small mammals in the vegetation about him, and every little while the thundering sound of caving banks and bars, undercut by the river current. Finally he hears the rustle made by the shaking of the twigs and leaves on the central cottonwood sapling in his fish-trap. He knows that now the fish are entering, and are tearing at the bait and shaking the sapling. After a sufficient time, when by the sound he judges that a sufficiently large number of fish are in the pen, he rises and drops his robe (or blanket), and very quietly makes his way down to the shore and picks up the gate of the pen. He carefully steps into the water, putting one foot before the other without rippling the water. Slowly and carefully he moves forward to the doorway of the pen. Arrived there, he sets the gate firmly, and fastens it with the Juneberry crossbar which he carries in his hand for that purpose. Now he calls his assistant to help him. He takes up the baits and hands them over. The assistant lays them on the bank and hands the dipping-basket to the operator, who

takes it, bends over, pushing it before him through the water all around the pen, especially next to the palings, where the fish will be trying to escape. When he has all the fish he can lift, he hands the basket over to his assistant, who empties them into the pit on the bank. The process is repeated until the operator has removed all the fish from the pen. Now he replaces the bait, removes the gate, cleanses the trap by splashing as before, steps out, and, as before, standing in the water on the shoreward side of the trap, and facing up-stream, he again cleanses himself by aspersion of water with the bunch of Artemisia gnaphaloides. During this latter operation he stands facing up-stream because every progressive symbolic action of the Arikara is made facing up the current of the Missouri river, for all tradition of their tribal life is in reference to that stream, whose designation in their own language signifies Mysterious river, or Sacred river. Their migration route for centuries has been along the course of the Missouri, and always up-stream. Their destiny, it seems, has been toward the source of the Mysterious river, and to do other than face up-stream in the manifest direction of their tribal destiny while performing a symbolic ritualistic act, would be to invite disaster.

The fisherman and his assistant now inspect their first catch. The very largest fish is picked out and

cleaned for immediate cooking, which is done by boiling in a pot. The viscera, but not the head, is removed, and the fish is cut into three pieces to facilitate cooking.³ This largest fish of the first catch is required to be cooked and eaten en-



Fig. 30.—Arikara fish-trap. Dipping out the fish with a fish-basket.

tirely and at once by the owner of the trap as a thanksgiving feast to the spirit of fish for the bounty given. The operator resumes his vigil,

³ If a fish was small, it was boiled whole after removal of the viscera; if large, it was cut into three pieces to fit it into the boiling kettle and to facilitate cooking. The head was not removed, but the entire fish was cooked.

and through the night one or more further catches may be made. In the early morning the owner of the trap divides all the fish he has caught during the night into shares which he distributes among his friends and kinsfolk, providing first of all for those who gave him assistance in the enterprise. The Arikara did not dry fish for future use, but took only what they cared to eat fresh.

The trap may be used several times after the first setting, but finally the time comes when all have satisfied their taste for fish, when the water has become too cold for comfort in operation. That time may be not very late in August; but when the time does come, the gate is finally closed, the baits are thrown into the pen, and all is abandoned to the action of the river current, which carries all away down-stream on the backward course of Arikara tribal migration, in the line of all things of the Arikara past.

MELVIN R. GILMORE

ARCHEOLOGY OF COLOMBIA SHOWN IN PHOTOGRAPHS

In connection with the celebration of the Four-hundredth anniversary of the discovery of America, there was held in Madrid, in 1892, a Columbian Historical Exposition. The various Latin Ameri-

can republics made special efforts to send to Spain comprehensive exhibits, and to this end Colombia was represented by one of the most brilliant displays of the Exposition. To illustrate the archeology of that country, all of the available local collections were photographed, including several thousand specimens of gold, pottery, stone, and other objects, as well as petroglyphs. These photographs comprise several series, consisting of more than three hundred and fifty large mounted prints, which were adequately described in a special catalogue published in Madrid in 1892. The chairman of the Colombian delegation to the Exposition was the late Sr. Dr. Julio Betancourt, Colombian Minister to Spain, who later became Minister to the United States. Dr. Betancourt's library was recently sold to a New York bookseller, so that the Museum, through the generosity of Mr. James B. Ford, has been enabled to acquire an almost complete set of these valuable and rare photographs in eleven portfolios. In the main, the series illustrates the antiquities of the Chibchan and Quimbayan culture areas, but some of the other areas of the interior of Colombia are likewise represented. So far as known, this is the only set of the photographs in the United States.

M. H. SAVILLE

EARLY BRAZILIAN ARCHEOLOGY

In the museums of the world, no part of the Americas is so inadequately represented in the field of archeology as that vast area of Brazil south of the Amazon. Even in Brazil itself, archeological specimens from this region are relatively rare in the museums of Para, Bahia, and Rio de Janeiro, and only in São Paulo, owing to the efforts of von Ihering, will be found material in quantity for study of the ancient tribes of the central and southern parts of the present republic. The Museum of the American Indian, Heye Foundation, has therefore been very fortunate in acquiring two archeological collections from this country, comprising altogether somewhat more than a thousand pieces.

The first collection was procured by the writer while in attendance at the sessions of the International Congress of Americanists, held at Rio de Janeiro in August, 1922. The two hundred and fifty specimens contained in this collection were all the collector, Dr. G. Giesbrecht, was able to bring together during more than thirty years, although he had exceptional opportunities as an engineer in connection with the surveys of the railway systems of Brazil. The greater part of the collection is from the states of Minas Geraes and Matto Grosso, but there are specimens from the

states of Ceará, Piauhy, Espirito Santo, Rio de Janeiro, São Paulo, and Santa Catharina. There are only four receptacles of pottery, but there are a smoking tube and three unusually large spindlewhorls of the same material. Among the implements of stone are to be noted long and short pestles, axes and celts, fibrolite being extensively used. One celt is of nephrite, a material thus far known in situ in only one place, namely, Amargoza in the state of Bahia. Ornaments of ferruginous quartz, quartz crystal, pink agate, and beryl, include a number of labrets of a long, slender type, peculiar in South America to the Brazilian culture area and known locally as tembetas. Also noteworthy are several beautifully chipped lance-heads of quartz crystal. Shell beads and other ornaments of shell are common.

The second collection is entirely from the state of Santa Catharina, and represents the gatherings of more than twenty years by their collector, G. von Hake. These objects aggregate about eight hundred in number, and consist largely of axes and pestles. As there are only eleven vessels of pottery, the fifteen in the combined collections, exceeding one thousand objects, attest the relative rarity of such artifacts and point to the probability that pottery was not extensively used by the ancient inhabitants of the greater part of Brazil, in contradistinction

to its occurrence in the region near the mouth of the Amazon, especially the island of Marajo, where vessels and other objects manufactured from clay are found in great numbers, but stone artifacts are relatively uncommon. The collection is rich in stone axes, a few of the grooved type being present, and pestles, some of large size, are very common. There are a considerable number of chipped arrow- and lance-heads, as well as perforated stones, steatite mortars (including several characteristic but rare forms in the shape of birds or animals), and objects of unknown or problematical use.

The combined collection, revealing a rather low state of early culture, affords for the first time a glimpse into the archeology of a region as large as the United States, which to the present has been almost entirely neglected.

M. H. SAVILLE

BLACKFOOT BEAVER BUNDLE

Among the many medicine bundles used from time immemorial by the tribes inhabiting the northwestern plains, the Blackfoot beaver bundle, so far as known, is the most pretentious. In size it overshadows all other known objects of its kind; in importance and sacredness it probably is surpassed by none.

Although there are amongst the Blackfeet about eighteen or twenty members who call themselves "beaver men," which signifies that they possess a beaver bundle, there are only three or four complete beaver bundles in the tribe. The remainder of those who call themselves "beaver men" either own a partially completed bundle or claim a part interest in a bundle, which is left in the custody of another member of the tribe. Even those bundles which are complete, or practically so, are owned by several individuals. The reason for this joint ownership is the fact that the acquisition of a beaver bundle entails an expense usually too great to be borne by one individual.

The bundles are transferred as the result of a vow made usually during severe illness. An Indian, or some member of his family, may be dangerously ill. It is then that he vows that in case the patient recovers, he will purchase the beaver bundle from its owner. It has been said that the owner of a certain bundle has no option, but must transfer his bundle to the one who has registered a vow. This is true, provided always the request is made in a prescribed ceremonial manner.

An Indian who has made such a vow, but fears that the owner might refuse his request if given the opportunity to do so, will endeavor to place the bundle owner in a position where refusal is impossible. This is done in the following manner:

The Indian who wishes to obtain the bundle invites a number of his tribesmen, including the owner, to come to his lodge for a feast. On the day appointed he builds a sweat tipi, and when his guests arrive he invites them to participate in a ceremonial sweat-bath. When all are gathered in the sudatory, the wife of the feast-giver passes a pipe to her husband, and he in turn offers it to one of his guests, with a request to recount, for example, one of his coups, or to sing one of his medicine songs. Such a request cannot be refused.

When the turn comes for the pipe to be handed to the bundle owner, the feast-giver tells of his vow and requests that the owner set a date for the transfer of his bundle. No matter how reluctant the owner may be to part with his bundle, he cannot refuse. Had he suspected that such a request would be made, he could have declined to enter the sweat tipi, and had he then been requested to transfer his bundle, he could have refused.

The transfer of the bundle constitutes a ceremony wherein each separate article contained therein is transferred and paid for. The owner takes in his hands one of the many skins or other article belonging to the bundle, sings the song or songs belonging to the particular object, and at the end of the song the feast-giver deposits whatever gift he sees fit to offer in exchange for it. If the gift

does not suit the bundle owner, he retains the object and transfer is withheld, unless the feast-giver increases the value of his offer.

This mode of transfer accounts for the reason why so many of the existing Blackfoot bundles are incomplete, and why few, if any, are owned individually. The price is too high for an individual to pay, hence he is obliged to ask the aid of friends or relations in order to have the bundle transferred as completely as possible. These friends or relations then claim an interest in the bundle, proportionate to the amount given by each.

The beaver medicine ceremony has been described by several writers; but the description given by Walter McClintock in his Old North Trail is of particular interest, as it refers to the beaver bundle of Mad-Wolf, which is the one now owned by the Museum.

W. WILDSCHUT

UNUSUAL SKULL FROM RHODE ISLAND

TEN years ago the late Charles R. Carr, of Warren, Rhode Island, partly explored a Wampanoag cemetery at the adjacent Burrs Hill. During the course of his excavations, the result of which was an exceptional collection of aboriginal artifacts, as well as of objects of European origin (all of

which were later presented to the Museum by Mrs. Carr), there was found the skeleton of an elderly woman, in clear sand, resting on a bed of closely laid cobbles four and a half feet below the surface. The remains lay on the left side, the knees drawn to the chest; the head was directed southeastwardly and the face southwestwardly. The body had been shrouded in a blanket, only two fragments of which, preserved by contact with copper objects, remained.

The most interesting feature of the burial was the preservation of some of the hair and of other parts of the head, by reason of the placement of two copper kettles thereon—the smaller one fitting, like a cap, the blanket-covered skull, the other being bottom-upward over the smaller kettle, its rim reaching almost to the shoulders. The penetration of the copper salts from the gradually disintegrating vessels tended to preserve not only the hair and flesh of the head of the woman to a degree most unusual in the eastern part of the United States, but had the effect of embalming the right eye and ear, and the tongue as well.

FOSTER H. SAVILLE

ESKIMO COLLECTION FROM BAFFIN LAND AND ELLESMERE LAND

A series of implements and art objects of ivory was obtained from Mons. Claude Vigneau, a member of Capt. Bernier's party which has wintered a number of times in Baffin Land. Animal and human figures carved in ivory (fig. 31) show a crudeness in comparison with similar products of the fine arts from the Eskimo of the Alaskan and especially of the Labrador regions. These objects were obtained at Ponds inlet, on the south shore of Bylot island, where Vigneau reports about seventy-five families of Eskimo gathered in 1922-23, and about twelve families at Arctic bay. A number of specimens were obtained from them. stone pipes, also from Ponds inlet, with wood and ivory mouthpieces, are very interesting. Two of these are illustrated in figs. 32 and 33. They conform to the eastern type of Eskimo pipe found through Labrador both among Indians and Eskimo. An Indian center of diffusion might well be imagined for the eastern Eskimo pipes of similar form, since along the Labrador coast, through the Hudson Straits area, and the coast of Hudson bay, there has been some interchange of culture between the Eskimo and Indians. The skin bag having two or more compartments, one above the other,

known as the "roll-up" woman's bag, is widely distributed among northern Indians. The tanned sealskin specimen of this bag (fig. 34), coming from Ponds inlet, is another article common to both races in the east, and may also have come from earlier Indian contact. In most respects the Ponds

inlet specimens are very similar to those

from northern Labrador.

At the time of Vigneau's stay at Arctic bay he had some contact with Nookudla, the Eskimo who was recently sentenced in Canada to ten years' imprisonment for killing a white man. The accompanying chart (pl. vi) of the country south and



Fig. 31.—Ivory carvings of a human being $(3\frac{1}{8}$ in, high) and a polar bear $(2\frac{1}{4}$ in, long) from Ponds inlet, Baffin Land.

west of Ponds inlet, made by Nookudla, is another affirmation of the oft-mentioned skill and accuracy of the Eskimo in chart-

making. Monsieur Vigneau's notes concerning the chart are as follow:

The author of the map was Nookudla, an Eskimo sorcerer and head-man at Ponds inlet, 1923. He made the map to illustrate a journey by sled that he took with one Tremblay, a member of the

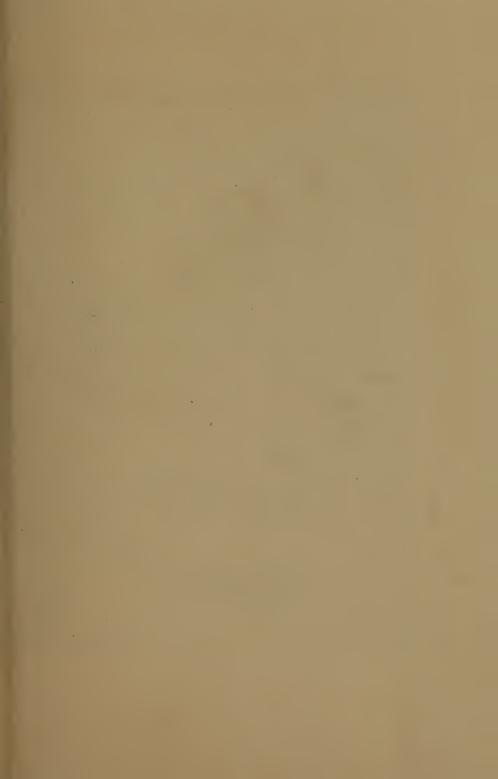






CHART OF THE COUNTRY SOUTH AND WEST OF PONDS INLET, DRAWN BY NOOKUDLA



Vol. I, Pl. VI

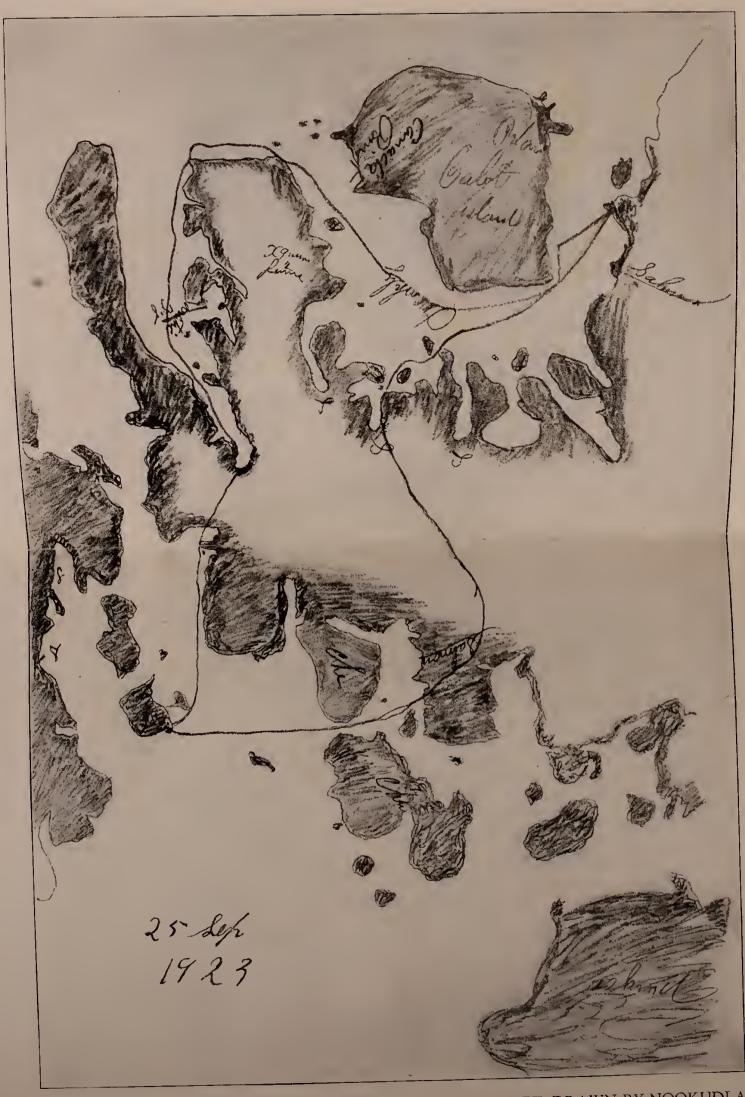
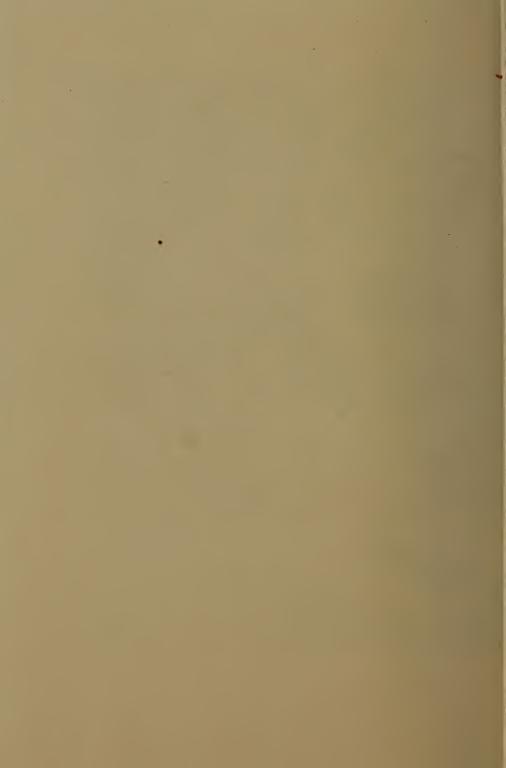


CHART OF THE COUNTRY SOUTH AND WEST OF PONDS INLET, DRAWN BY NOOKUDLA



Arctic expedition (S. S. Arctic, 1923) under Capt. Bernier. Tremblay reported that he had reached the northern shores of Hudson bay with Nookudla.

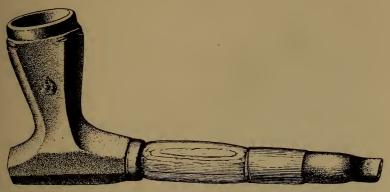


Fig. 32.—Stone pipe from Ponds inlet, Baffin Land. (Length, $5\frac{1}{4}$ inches.)

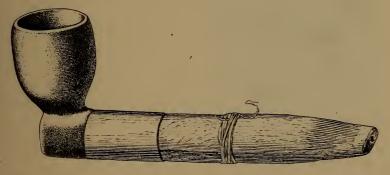


Fig. 33.—Stone pipe from Ponds inlet, Baffin Land. (Length, $4\frac{7}{8}$ inches.)

Vigneau, suspecting exaggeration in the statement, obtained from Nookudla the accompanying map, showing their line of travel, which discredits

Tremblay's claim. This is the original Nookudla map.

Nookudla has a career. He killed a white man, at the point marked X in Lancaster sound,



Fig. 34 —Seal-skin pocket bag from Ponds inlet, Baffin Land. (Height, including flap, $12\frac{3}{4}$ inches.)

north Baffin Land, for cheating the Eskimo in trade (inf'n. C. Vigneau), and was captured by Capt. Tredgold of the Canadian Mounted Police, taken out for trial, and is now serving ten years' sentence. His pipe and sealskin coat are in the collection. Explanations of the signs on map are as follow: The line denotes Tremblay's route marked by Nookudla. The place of starting on right of map is Ponds inlet, where the S.S. Arctic wintered in 1914-15. The marks "che 8, 8" are

Vigneau's marks, meaning "caribou" which were there abundant. At the top is Bylot island, Canada point on its west end, Salmon river opposite on the eastern mainland. Opposite Canada point is Xquimu (sic.) 2 femme, meaning "Eskimo

2 women' where some time ago, a story related through Nookudla, they abandoned a man who

had taken another's two wives. The man found, on the island there, a dead whale. He cut up the meat and hid it among the crannies in the rocks. Later his captor returned, thinking that the man had by this time starved. He landed from his kayak and looked about the island, but saw nothing. The captive had hidden himself. When his pursuer had gotten some distance ashore, he came down and took the kayak and escaped, but was upset and drowned. The other man then starved on the island, not being able to find the whale meat, which



FIG. 35.—Doll from Ponds inlet, Baffin Land. (Height, $10\frac{1}{2}$ inches.)

the first had hidden among the rocks. To the west of this bay is Arctic bay, where the Arctic also wintered.

The specimens from Ellesmere Land, Craig harbor, were found when the *Arctic* wintered there in 1922-1923.



FIG. 36.—Model of a kayak from Ponds inlet, Baffin Land. (Length, 16 inches.)

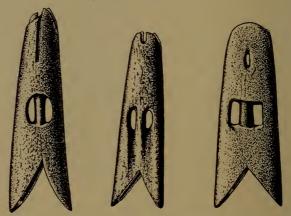


Fig. 37.—Ivory toggles from Craig harbor, Ellesmere Land. (Two-thirds actual size.)

Of particular interest are the three ivory toggle-heads for harpoons (fig. 37), found in the moss three

feet beneath the surface of the ground by Vigneau at Craig harbor, South Ellesmere Land. There has at times been a belief among ethnologists that this region was uninhabited by the Eskimo, but Vigneau makes a very interesting assertion that the

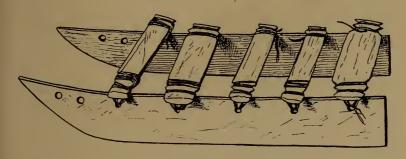


Fig. 38.—Model of sled in ivory from Ponds inlet, Baffin Land. (Length, $4\frac{1}{16}$ inches.)

party met two families there in 1922-23. The toggle-heads are much disintegrated through exposure to the elements. In form they are of a smaller and finer type than is usual elsewhere, coming nearest to those figured by Boas from Baffin Land.

FRANK G. SPECK

UNUSUAL ESKIMO SNOW-SHOVEL

The strange snow-shovel represented in the accompanying illustration (fig. 39), fashioned from the wood of some coniferous tree, was obtained in 1918 from the Copper Eskimo in the vicinity of Tree river, Coronation gulf. Considering the fact that it is made from a single piece of wood, it is of unusual size for an Arctic implement, for it measures 41 inches in length by 20 inches in maximum width, tapering to 3 inches at the proximal end, which is carved to represent a seal's head. Its thickness is one-half to three-quarters of an inch. The front side of the blade is slightly concave, and on its lower edge a strip of caribouhorn is lashed with sinew thongs, the horn being so cut as to present a flat surface against the wood and a sharp cutting edge against the snow. In the middle of the blade, 19 inches from the proximal end, two holes, 6 inches apart, are drilled through the wood. A piece of antler inserted in these holes and held in place with bone pegs functions as a hand-grip. In use the shovel is remarkably well balanced, and a considerable quantity of snow could be carried with it. The implement has been greased with seal-oil, in order that the snow might slip from it easily and that the wood might be strengthened and preserved.

Among the Eskimo a snow-shovel is considered an essential part of the domestic equipment of

every family, for it always comes in handy for clearing away the top snow from a proposed camp-site, and it is used also for filling the cracks between the blocks of a new snowhouse and for banking loose snow against it, the latter being an important detail of the erection of an iglu in winter.

Because of the lack of raw material for making others, the Eskimo of Coronation gulf do not care to part with their snow-shovels, especially when they are in such good condition as the one here described. In

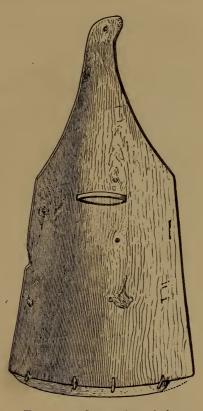


Fig. 39 —Snow-shovel from Coronation gulf. (Length, 41 inches.)

his preliminary report, Stefansson says on this point: "A wooden snow-shovel made from a single piece of wood is the most difficult article

that the Copper Eskimo have to make. It is extremely hard for them to obtain a log large enough so that a shovel can be adzed out of it, and the labor is considerable. A good snow-shovel made from one piece of wood is worth as much as a dog or a very good sled.¹

The Central and Western Eskimo use three types of snow-shovels: (1) a rude form with a rounded, flat blade made from a piece of bone of the whale, lashed to a separate handle of wood; (2) a form with blade and handle carved from one piece, or with the blade made of several flat pieces of wood lashed together; and (3) the type herein described. A fine example of the first type, from Bering strait, is exhibited in the Eskimo Hall of the Museum. Both the first and second types are illustrated in Nelson's memoir on the Eskimo about Bering strait.²

² Eighteenth Report of the Bureau of American Ethnology, fig. 22, and pl. 35, fig. 4.

D. A. CADZOW

¹ Anthropological Papers of the American Museum of Natural History, vol. XIV, no. 1, 1914.

MICMAC SLATE IMAGE

For the Indians of the maritime provinces of Canada and Maine we have occasional references, among early writers, to small stones which were

kept as fetishes. The missionaries called them "devils." In the Algonkian dialects of the Northeast, however, they are known as baohigan (Penobscot), buòwin (Micmac), buwàgan (Montagnais)—all denoting the means by which magic is accomplished. In northeastern North America such fetishes were cherished by individual hunters, and then we hear of them as being the property of professional conjurors.

Specimens of individual "luck stones" have now and then been obtained from the area, but nothing so elaborate or striking in form as the slate image figured herewith, found in the summer of 1923 by Mr. M. E. Leach, of the University of Pennsylvania, in a field on the west bank of Clyde river, Nova Scotia.



Fig. 40. — Micmac slate image from Nova Scotia. (Height, $4\frac{3}{4}$ inches.)

The figure is four and three-quarters inches in height. It needs no description other than to mention the incised lines on the body and legs.

Coming from the region where such articles are known by tradition, there is little need for hesitating to ascribe the manufacture and use of this particular specimen to some former Micmac sorcerer who lived on the site where it was found.

FRANK G. SPECK

AZTECAN SCULPTURE OF THE SUN GOD TONATIUH

THE stone sculpture illustrated in fig. 41 was brought to New York more than forty years ago by an engineer engaged in the construction of the Mexican Central Railroad, and was lately presented to the Museum by Mr. M. D. C. Crawford. The object, sixteen and a half inches in diameter and somewhat battered on its carved surface, represents the characteristic sun disc, with the four main pointers and other conventional emblems on the margin, in all respects similar to that found on the famous Calendar Stone and other carvings, and in the codices. A unique feature is the human figure sculptured in the center and extending over the marginal design (fig. 42). The exact counterpart of this figure the writer has been unable to find in other sculptures or in the codices. It would seem, however, to represent the Sun God Tonatiuh.



Fig. 41.—Aztecan sculpture of the Sun God Tonatiuh on a sun disc. (Diameter $16\frac{1}{2}$ inches.)

In the Vienna Codex there is a painting of the Sun God in a similar disc, and also a good representation in the greenstone disc in the Berlin Museum, the so-called Alexander von Humboldt Calendar Stone. It is difficult to dissect the different parts of the costume of the god. He carries a shield and four blunt arrows in one hand, and there is a pecu-

liar thorn-like object projecting from the mouth of the upturned face, attached to which is a threefold object, but whether it is held by a hand it is not possible to say. The kneeling posture of the



Fig. 42 —The Aztec Sun God.

figure is different from that of the figures mentioned in the other two representations. It is a noteworthy addition to the material relating to this Nahuan deity.

M. H. SAVILLE

OLD PORCUPINE-QUILLWORK

The Museum has many remarkable examples of early Indian porcupine-quillwork; indeed its collection is so extensive as to create surprise that such a large number of specimens of this kind should have been acquired in a relatively brief time, when the rarity of really fine old quillwork is considered. It will therefore be gratifying to students to learn that the Museum has just added to its collection several pieces from one of the northern Canadian tribes, probably the Cree.

Among these are a coat and a pair of leggings made of deerskin, which are especially worthy of notice by reason of the exceptionally good porcupine-quillwork with which they are embellished. It is regretted, however, that there are no positive data as to the origin of these garments, as is the case with many of the fine old specimens of this kind.

The coat, evidently made for a white man, probably a trader, has a turned-over collar and lapels, and constricted waist-line at the back, giving a flare to the skirt in the rear. The seams are welted, and sewn with sinew. The collar and lapels are bound with narrow strips of white weasel-skin, but most of the hair is worn off. The shoulders of the coat are ornamented with

strips of quillwork of the kind described as a woven technique.1 These strips are of exceedingly fine workmanship, and are edged with a fringe wrapped with quills. The lapels are quilled with two folded techniques,2 the plain band and sawtooth forms. The sleeves are provided with turned-up cuffs decorated with floral designs, as is the case with a semicircular piece below the collar on the back. In addition to the quilled ornamentation there is a painted design down each side of the opening of the coat and around the bottom of the skirt. Fig. 45 represents the detail of the whole design on the two edges of the front, while that part of the drawing between a and b shows the design painted around the skirt. The squares in the two sections of checkerboard pattern are blue, outlined with red; the inner lines of the triangles and squares are blue, the outer ones red; the outside borderlines are red, and there are faint traces indicating that the inner borderline was blue. The width of the design is somewhat irregular throughout: on the front of the coat it averages an inch and a quarter, while around the skirt it is in some places two inches or more in width.

² Ibid., p. 19, fig. 12, and p. 44, fig. 51.

¹Orchard, Technique of Porcupine Quill Decoration, Contributions from the Museum of the American Indian, Heye Foundation, vol. 1v, no. 1, p. 35.



Fig. 43.—Coat probably of the Cree Indians with porcupinequill and painted ornamentation. (Length, 3 feet 7 inches.)

[159]



Fig. 44.—Leggings probably of the Cree Indians with porcupinequill ornamentation. (Length, 3 feet.)

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The leggings, in cut, are of the Cree type; each is ornamented with a strip of the woven technique of quillwork the entire length and about an inch wide. There is a narrow lengthwise flap decorated with floral designs, and behind the flap is a fringe wrapped with quills. The bottom edges are furnished with finely executed lines of a diamond-shape pattern of folded technique.³

As is usual with the majority of examples of old quillwork, the colors produced with native dyes are soft and blend well together, producing an effect far superior to the colors obtained from the use of traders' dye materials. Indeed only the most cásual inspection is necessary to show the vast difference between the old work and the new. These specimens, in both color and design, are fine examples of the old work, which, owing to contact with civilization, may be regarded as one of the lost Indian arts.

W. C. ORCHARD

³ Ibid., p. 23, fig. 18.

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Fig. 46.— Stone baton or club from Oaxaca

A BATON-LIKE OBJECT FROM OAXACA

THE Museum has recently received on deposit from Mr. A. B. Stubbs, of Tampico, Mexico, a noteworthy object of a kind of dioritic stone (fig 46), the use of which is problematical. It was found a number of years ago in the vicinity of Jalapa, on the Tehuantepec river, in the district of Tehuantepec, State of Oaxaca, Mexico. This region seems to be included in that of the Zapotecan culture, although the Zoque have settlements in the immediate neighborhood. This unique object is fifteen and a quarter inches long, and at first glance might be taken to be a pestle, as there is a slight abrasion on the lower end; but pestles are not generally fashioned with an enlarged upper part as in the present specimen. A search of the literature on the archeology of Middle America has failed to produce any object approaching this one in form. It is possible that it was designed for use as a baton, or

ceremonial scepter; or it may have served simply as a club for use at short range in battle. This latter, however, is purely conjectural, and until definite information is forthcoming the specimen must be included in the considerable number of objects from Middle America whose purpose remains unknown.

M. H. SAVILLE

RECENT ACCESSIONS BY GIFT

From Lieut. James H. Moffatt:

Bone harpoon-head. Eskimo of Point Barrow, Alaska.

From Mr. John P. C. Alden:

Pair of silver bracelets; one silver bracelet; pair of silver earpendants. Seminole. Florida.

From Mr. Edwin Abrams:

Nine arrowpoints. Canarsie, N. Y.

From Mr. F. S. Dellenbaugh:

Oil-painting of ruin in the wall of Walnut cañon, Arizona; 57 photographs; two publications.

From Mr. A. H. Twitchell:

One publication: "The Pathfinder of Alaska."

From Mr. Henry F. Hawxhurst:

Two arrowpoints. Carnarsie, N. Y.

From Mr. Henry Martin Cowles:

Copper figure of the Chibcha of Cundinamarca, Colombia.

From Mr. Franklin S. Smith:

Catlinite pipe-bowl inlaid with lead. Santee Sioux.

From Capt. W. D. Collier:

Conch-shell implement. Key Marco, Florida.

Shell celt with projection on each side; fragment of large shell plummet-like object with three grooves; grooved stone net-sinker. Collier county, Florida.

From Mr. Theodore C. Camp: Shirt. Taos, Mew Mexico.

From Mr. J. J. Landivar Ugarte:

Jar, red ware, white and brown painted decoration. Tumbaco, Province of Pichincha, Ecuador.

From Mrs. Helen N. Doré:

Two effigy jars representing human figures. From the Indians along the line of the Quito and Guayaquil Railroad, Ecuador.

From Mr. Carlos M. Larrea:

Arrowpoint. Taltal. Chile.

From Dr. F. G. Speck:

Skirt of cloth for baby. Aymara. La Paz, Bolivia.

From Mr. James R. Anderson:

Pestle with projecting flat top; grooved net-sinker; two perforated plummet-like objects. Big Bar, Trinity county, Cal. (See page 165.)

From Miss Frances Jenkins Olcott:

Fragment of end of pestle. Pequot Fort site, Mystic, Conn.

From Dr. A. V. Kidder:

Obsidian arrowpoint, and 8 pottery heads. Teotihuacan and Valley of Mexico, Mexico.

From Mr. Ernest Schernikow:

Five photographs.

From Mr. E. A. Gellot:

Jar, incised decoration below rim. Aqueduct, N. Y. (Presented in memory of his daughter, Miss Louise A. Gellot.)

From Mrs. Thea Heye:

Ceremonial wooden spade. Ica, Peru.

From Mrs. Charles W. Raymond:

Medicine-pouch; pair of moccasins; animal-claw necklace. Sioux.

Gun case; baby carrier. Nez Percé.

Photograph taken on Flathead reservation, Montana.

From Mr. Reginald Pelham Bolton:

Piece of glass; 29 bones; 4 animal teeth; 3 fragments of shell fish-hooks; 3 fragments of bone awls; 4 arrowpoints; 12 stone chips; piece of bitumen; 9 shells; fragment of bone flaker; 2 pestles; mortar; hammerstone. Burns Point, Santa Barbara, California.

Fragment of bone implement; 6 bones; 2 stone chips; fragment of pottery tile; fragment of stone mortar; fragment of pestle; crude celt. Polo Field Point, Santa Barbara,

California.

Four bones; 2 stone ships; 2 fragments of shell. Burton Mound site, Santa Barbara, California.
Two shells. Coalinga, California.
Arrowpoint. Yosemite valley, California.
Five chipped points. Gallup, New Mexico.
Arrow straightener; 2 fragments of corn-cobs; 3 bones, worked fragment of selenite; 3 chipped points; 7 stone flakes; 29 potsherds. Ancient Tewa ruin of Tsherege, Pajarito cañon, near Santa Fe, New Mexico.

NOTES

Such interest in the publications of the Museum is shown that it has become necessary to issue a fourth edition of the List of Publications. This latest edition lists the two volumes of Contributions to South American Archeology, six volumes and a part of the seventh volume of Contributions from the Museum, seventy-two volumes and pamphlets forming the series of Indian Notes and Monographs, and two Leaflets. A comprehensive index of authors and titles is included.

AN UNUSUAL stone pestle has been received by the Museum as a gift from Mr. James R. Anderson, of Seattle, Washington. This pestle was found at Big Bar, Trinity county, California, and is of the usual bell form found in northern California; but in this instance the implement has a very wide, projecting, flat top, not more than a quarter of an inch in average thickness at the edge, but is of greater diameter than the base.

MR. A. HYATT VERRILL, who left New York in February to gather objects representing the material culture of the Teguala Indians of Darien, Panama, has finished his task and forwarded the collections to New York. Further mention of Mr. Verrill's gatherings will be made in the next issue of *Indian Notes*.

Mr. E. H. Davis has finished the collection of ethnological material among the Yaqui of the Sonora mainland and the Seri of Tiburon island in the Gulf of California, and forwarded the objects to the Museum, by official permission of the Mexican Government.

MR. ALANSON SKINNER, who resigned in 1920 to accept appointment on the staff of the Milwaukee Public Museum, returned to the Museum of the American Indian, Heye Foundation, on June 1, and henceforth will continue his researches under its auspices.

DR. S. K. LOTHROP has concluded his investigations in Salvador, and has sent to the Museum a large collection of archeological and ethnological material from that country.

Mr. David E. Harrower left New York on June 15 to collect ethnological material in eastern Nicaragua for the Museum.

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Vol. I

OCTOBER, 1924

No. 4

A STRANGE TYPE OF POTTERY FROM UTAH

Messrs. Charles McLoyd and C. C. Graham were among the first to collect Cliff-dweller and Basket-maker material in a commercial way. In 1889 they dug into certain prehistoric ruins in Mancos cañon, southwestern Colorado, the material recovered later being transferred to the State Museum at Denver. During the winter of 1890-91 the same collectors made a trip to southeastern Utah, northeastern Arizona, and northwestern New Mexico, the objects derived from their digging being bought by the Rev. C. H. Green and a printed catalogue thereof published in Chicago in 1891. Ultimately this collection was obtained by the Field Museum of Chicago.

A second collection was advertised by McLoyd and Graham in 1894, the printed leaflet describing it bearing the title, Catalogue of a very large collection of prehistoric relics, obtained in the cliff houses and

caves of southeastern Utah. This collection, which was first seen by the writer in Durango, Colorado, where it was owned by Mr. John A. Kuntz and exhibited in the court-house, was purchased for the Hyde Exploring Expedition. While arranging and cataloguing the McLoyd and Graham material, and also that of the early Wetherill gatherings from the same region, the writer had an opportunity to examine with care the earthenware objects that form the subject of this brief paper, but neither in these collections nor in those exhibited by other museums does other pottery of the same class appear.

In 1892 Mr. Warren K. Moorehead conducted an exploring expedition in the San Juan region of southeastern Utah. In his report¹ he describes certain cists, but does not associate them with the Basket-makers. Mr. Moorehead says:

"Upon inspecting some of the caves, stone slabs four or five feet across were seen upon the surface.
... Upon removing them, openings two or more feet in diameter were disclosed leading into domeshaped cavities . . . The chamber had the appearance of a bell, small at the top and large at the bottom. There are as many as twenty of these rooms in one cavern. Many of them penetrated

¹ The Ruins of Southern Utah, *Proceedings Amer. Asso. Adv. Sci.*, Rochester, 1892.

through the clay and were excavated into the soft sandstone beneath . . . Some of the smaller underground rooms were used as granaries, and several were discovered filled with seeds and corn. Skeletons were frequently found in the rooms accompanied by textile fabrics, deer-skin garments, flint implements, etc. In no instance was pottery found in the underground rooms . . . Our observations led to this conclusion. The region was inhabited by two and possibly three tribes more or less alike in manner of living, in agriculture, in pottery making, in weaving, and in other arts. They differed in unimportant matters. For instance, the Cliff and Cave dwellers made mummies of their dead, the Valley dweller placed his in graves. One flattened the skull by artificial pressure, the other did not."

It is therefore evident from Mr. Moorehead's description that both Cliff-dweller and Basket-maker remains were found, and the absence of pottery in the cists of the latter was so pronounced as to cause comment even thirty-two years ago.

As our series of vessels from Grand Gulch is unlike any earthenware from the Cliff-dweller area, and as it is still uncertain whether the Basket-makers engaged in the manufacture of pottery, the specimens in question are worthy of special consideration.

In speaking of this pottery, its finders, McLoyd and Graham, say:

"The third kind of pottery is very valuable, less than fifty pieces having been found to date, and those in the under-ground rooms that have been mentioned as being underneath the cliff dwellings, and in the same caves. It is a very crude unglazed ware, some of the bowls showing the imprint of the baskets, in which they were formed. Nos. 16 to 27 inclusive are of this kind of ware . . . Nos. 16 to 27 inclusive, were found in a large underground room in a cave in Grand Gulch, and were from 6 to 8 feet below the surface. The room had been filled in with refuse, and a stone cliff house constructed over it. Skulls Nos. 33 and 37 were found in the same room, but apparently the pottery had not been buried with them, as it was in another part of the room."

Ten years after Mr. Moorehead presented his report, the writer published a brief paper on the Basket-makers,² in which these vessels are mentioned. His sole reason for attributing them to the Basket-makers was based on the conditions under which they were found, as stated by the collectors in their printed catalogue. In the leaflet mentioned, the writer says:

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² The Ancient Basket Makers of Southeastern Utah, Guide Leaflet of the American Museum of Natural History, New York, 1902.

"Although most of the ancient Pueblo people and the cliff-dwellers were masters of the art of making pottery, it would seem, from the data at hand, that the Basket-makers had not developed whatever ability they may have had in that line. In fact, the majority of the vessels found with the remains of these people are of a very crude type, indicative of the first steps in fictile art as pointed out by specialists."

After extended investigations by Drs. Kidder and Guernsey they doubt whether the Basket-makers ever made pottery, and are inclined to the conclusion that no known fictile productions can be attributed to these ancient people. In discussing this phase of the material culture of the Basket-makers,³ with special reference to certain unfired fragments recovered by Mr. Nusbaum in Cave du Pont, Utah, they say:

"The above specimens, which being unfired are not really pottery, naturally bring up the question of presence or absence of true fired pottery in the Basket-maker culture. The only such pieces that have ever been attributed to the Basket-makers are some vessels in a collection from Grand Gulch pro-

³ A Basket-maker Cave in Kane County, Utah, by Jesse L. Nusbaum, with notes on the artifacts by A. V. Kidder and S. J. Guernsey. *Indian Notes and Monographs, Museum of the American Indian*, Heye Foundation, Misc. No. 29, New York, 1922, pp. 141-144.

cured by McLoyd and Graham and sold by them to the Hyde Exploring Expedition . . . These pieces are now in the Museum of the American Indian, Heye Foundation, where we have had an opportunity to examine them. They are a peculiar heavy, slate-gray ware, with well-smoothed but rather uneven surfaces; in form they are unlike any other Southwestern pottery with which we are familiar; they are small, bowl-like, dipper-like, and crucible-like vessels, the latter provided with lugs and spouts. Several of them are crudely decorated with broad lines and large dots of dull-red paint. While it is not feasible to describe this pottery adequately in the present publication, we may say that to anyone who has worked much with Southwestern ceramics it is quite distinctive, and once seen could be identified at a glance, even in small sherds. We do not believe it to be of Basketmaker origin, because no similar ware was ever discovered by the Wetherill brothers in the large number of Basket-maker caves dug by them, nor have we ever found any of it in our own explorations in northeastern Arizona and southeastern Utah. On the other hand, it is certainly not characteristic of any known later phase of Southwestern culture. There is, then, no well-authenticated instance of true fired pottery of Basket-maker origin, and it seems hardly possible that if these

people had possessed pottery, some vessel would not have turned up in the many graves well-stocked with offerings that have been found by the Wetherills and ourselves, or some fragment among the quantities of rubbish so carefully gone through in Cave duPont. This gives the little unfired specimens found by Mr. Nusbaum a particular interest, for, as was said above, they may represent the very first attempts of the Basket-makers at the manufacture of pottery."

Close examination of the pottery vessels shows that they fall into two classes. The first includes the five smaller pieces, and the second the other seven. The vessels composing the first series are rather carefully modeled and the surfaces have been well smoothed; in fact, the marks of the smoothing tools are plainly to be seen on most of them, and although they were not covered with a slip, care was exercised to produce a uniform surface. All of the vessels have been fired, and most of them are more or less clouded by smoke. The five vessels of the first group seem to have a much better temper than the remainder; their walls are thinner, and the general technic is superior. All the vessels are of a grayish-brown ware.

No. 1 (fig. 47, a) of the first group, is an elliptical receptacle with flattened base and an incurving upper part in which is a central opening three and

three-quarter inches long and five-eighths of an inch wide. Each end terminates in a lug.

No. 2 (fig. 47, b) is a somewhat elliptical bowl. The color is gray-brown with a dull-yellow cast, but the greater part of the exterior was smudged in firing, and the smudging has extended to the interior, blackening it entirely. No attempt at decoration was made.



Fig. 47.—Plain vessels from Grand Gulch, Utah. (Length of a, $6\frac{1}{8}$ inches.)

No. 3 (fig. 48, a) is a small bowl, showing slight smoke clouding on the exterior. Just below the outer rim there is a series of six pointed projections, some of which still retain the red paint with which they had been embellished (fig. 49, b).

No. 4 (fig. 48, b) is a very deep, bowl-like vessel which tapers gradually to a rounded bottom. It originally had two projecting lips, one opposite the other at the rim, but only one remains. This receptacle is smoke-blackened within and without.

It exhibits (fig. 49, a) exterior decoration in dullred, consisting of a row of large dots encircling the body beneath the rim and a broad central band below. The upper surface of the lip projections had been painted with the same color.

No. 5 (fig. 50, a) is a ladle. The surface is somewhat smoke-blackened, and there is a very faint



Fig. 48.—Vessels with rim projections, from Grand Gulch, Utah. (Diameter of a, $3\frac{3}{4}$ inches.)

red-line decoration on the upper part of the handle and on the upper edge of the bowl rim (fig. 49, c).

The seven pieces forming the other group are more crudely fashioned. No. 6 (fig. 50, b) is a dipper, the bowl of which is irregularly oval, and the handle crude, presenting the appearance of having been formed by compressing the clay with the gripped fingers. The inner part of the bowl shows traces of a wash of dull-red paint; there are remains

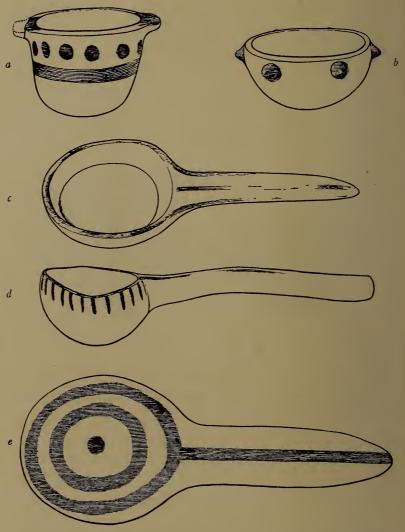


Fig. 49.—Patterns on painted pottery from Grand Gulch, Utah. (Length of e, $11\frac{1}{4}$ inches.)

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also of a red-line decoration on the upper part of the handle, and a series of short, red, vertical lines ornament the outer edge of the rim (fig. 49, d).



Fig. 50.—Dippers from Grand Gulch, Utah. (The longer one is $10\frac{1}{8}$ inches.)

No. 7 (fig. 51, b) is a form otherwise unknown in Southwestern pottery. The shape is that of a



Fig. 51.—A shallow dipper and a paddle-like utensil from Grand Gulch, Utah.

(Length of b, $11\frac{1}{4}$ inches.)

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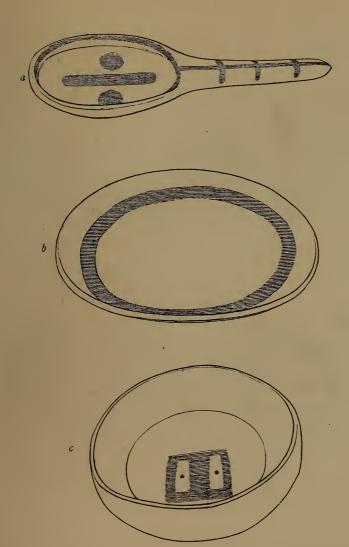


Fig. 52.—Patterns on painted pottery from Grand Gulch, Utah. (Diameter of b, $7\frac{1}{2}$ inches.)

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hand-mirror, flat on one side and slightly rounded at the edges. There are the same darkened areas as a result of the firing. The rounded side is ornamented with a central dot surrounded by two concentric circles, extending from which, lengthwise of the handle, is a bold line (fig. 49, e).

No. 8 (fig. 51, a) is a very shallow, dipper-like object with an oval bowl. The handle is crudely modeled, and although not so rough as that of No. 6, it is similarly shaped. The rim of the bowl portion is embellished with a narrow red line, from which extends another red line, intersected by three short cross-lines, to the end of the handle (fig. 52, a). In the center of the bowl there is a broad, well-defined band of red, with a large dot on each side.

No. 9 (fig. 53, a) is a crudely fashioned dish with an unsmoothed surface, unlike the other pieces in finish, although evidently made of the same kind of clay. Its general appearance is that of a badly fired piece. The surface exhibits smudging, and the clay lacks the temper shown in the smaller pieces. The painting is confined to a broad red circle on the inner surface near the rim (fig. 52, b).

No. 10 (fig. 54, a), a bowl, is crudely made and without ornamentation.

No. 11 (fig. 54, b) is also a bowl. The outer surface from rim to base is deeply impressed with

the markings of a coiled basket, in which the receptacle evidently was made, the impression being so



Fig. 53.—Vessels from Grand Gulch, Utah. (Diameter of b, $g_{\frac{1}{8}} \times 7_{\frac{5}{8}}$ inches.)



Fig. 54.—Bowls from Grand Gulch, Utah. (Diameter of b, $6\frac{3}{8}$ inches.)

well defined that the stitches may be counted. The central part of the interior bears a red-painted design in the shape of a hollow square with a broad band across the center and with a small dot in each of the spaces thus formed (fig. 52, c).

No. 12 (fig. 53, b), another bowl, is slightly oval. Like the last it was made in a coiled basket, and although the pattern is not so strongly impressed, it is plainly traceable over the greater part of the outer surface. Two heavy lugs project from opposite sides just below the rim. The rim between these lugs on one side is conventionally rounded, while on the other side it is more or less pointed to facilitate pouring. This bowl is not painted, but there are indications of tool marks, especially on the inside, which has the appearance of having been smoothed with a piece of fabric.

The interesting question in connection with this pottery is its origin—whether it was made by Basket-makers or Cliff-dwellers, or was introduced by some unknown outside tribe. Found as the vessels were in a Basket-maker cave under a cliff-house, they were seemingly associated with Basket-maker culture, but owing to the fact that no pottery has been definitively identified as having been made by the Basket-makers, and as our little collection shows considerable knowledge of the potter's art, no slight stretch of imagination is required to make the facts and the probabilities coincide.

Judging the pottery by known examples from Cliff-dweller sites, we are again at a loss to find similarities. The use of basketry in modeling pottery vessels was known to Cliff-dwellers and to ancient Pueblos, to be sure, for various vessels showing basket impressions have been found among the ancient remains of both; but in the present case the stitches are so well impressed as to enable identification of the baskets in which they were modeled as of the same class as the traybaskets of the Basket-makers. It is possible that these earthenware utensils mark a transition in the material culture of the Basket-makers and the first step in pottery-making, a nascent industry that came to an end with the advent of the Cliff-dwellers or of some other people.

This brings up the third possibility, that of an unknown pre-Pueblo people which may have occupied Basket-maker caves for a time and left behind them this unusual pottery. So many Basket-maker artifacts have been destroyed by relichunters that much of the evidence needed to determine the sequence of occupancy of ancient sites in the arid region has been lost forever. Study of the stratigraphy of these sites of occupancy is still in its beginning, but could many of the old Basket-maker caves be studied today in the condition in which they were seen by McLoyd and Gra-

ham and by the Wetherill brothers, more conclusive evidence might be advanced for the solution of such problems as the one that now confronts us.

G. H. Pepper

A WEST INDIAN GEM CENTER

That the warlike and piratical bands of Carib Indians found by Columbus on the islands of the Lesser Antilles may have developed the lapidary's art to a high state of perfection, was never suspected until recently, when the S. W. Howes collection reached the Museum from the island of Montserrat, British West Indies, and the remarkable series of beads and pendants of carnelian and amethyst, of chalcedony and rock crystal, of turquois, lapis lazuli, and jade, were spread upon the table for inspection.

Montserrat, tiny though it is, measuring only twelve miles long by eight miles across, must have been a kind of gem center for the Antillean world of early days, for the other islands of the Lesser Antilles, judging by our collections, have yielded but few articles of this kind.

The presence of so many ornaments of semiprecious stones might be more easily explained by the theory of intertribal trade if Montserrat were reasonably near the mainland of South Amer-

ica, but in reality the rugged islet lies well to the north of the center of the island chain, and is therefore nearer to Porto Rico than to Venezuela.

Yet the materials for making the ornaments, or most of them, must have been brought in by trade, in spite of the distance, for, according to Mrs. Howes, who lives on the ground, they do not occur naturally on the island. Whatever the source of the materials, one thing is certain—that many of the beads were actually manufactured on the island of Montserrat, for the collection includes specimens, particularly of carnelian, in all stages of manufacture, from the slightly-worked pebble to the finished article.

Most of the stones used are very hard, and it must have taken a long time to peck and grind them into shape; while the nature of the tools available to the workman of that day and place, and capable of drilling such small holes through such obdurate materials as amethyst and quartz crystal, remains a mystery.

It must be stated, however, that knowledge of such drilling of hard materials was not confined to Montserrat nor to the Lesser Antilles, for it appears also in South America (similar beads having been found especially at Santa Marta in Colombia), in Central America, and in the southern part of North America, particularly in Mexico,

where the aboriginal American lapidary's art seems to have reached its apex.

Most of the beads are cylindrical or slightly bulging in the middle—barrel-shape—and vary in size from a quarter of an inch or a little less in length by about three-sixteenths of an inch in diameter, to four and three-quarters inches by one inch; from this they run to simple disc forms, and to others almost globular. One bead, made from a kind of agate, shows a thick lenticular form with the periphery marked by a distinct edge. One of the cylindrical beads made of amethyst, an inch and a half long by three-eighths of an inch in diameter, is quite the finest thing of the kind the writer has seen. Some of the beads have a transverse as well as a lengthwise perforation.

Unlike anything else we have from the West Indies or elsewhere is a pair of buttons, or pendants, made of quartz crystal. They are oval in form, one side of each being nearly flat, the other convex. From the flat side of each two holes have been drilled at such angles that they meet within the body of the ornament: this was to accommodate the cord, by means of which the objects must have been suspended. They would have made attractive ear-pendants.

For some reason the frog must have been a very popular animal in Montserrat, for the collection

contains a number of little pendants, mostly of nephrite (jade) or of similar materials, carved to represent this creature. In some cases the frog is quite lifelike and easily recognized; in others, it it conventionalized to such an extent that without the more realistic specimens to serve as a guide, it would be impossible to guess what animal was intended. The only exception to the frog as a subject is a pendant representing a human head, neatly carved of some compact dark substance, apparently cannel coal.

Now comes the question, Why do we think these beads and pendants of semi-precious stones were made by the Carib Indians? If such things are not commonly found on other islands known to have been Carib strongholds, is there not a possibility that some other people—a tribe of lapidaries and bead-makers, immigrants from Colombia, let us say,—may have lived on Montserrat and made the objects in question?

The collection found with the beads and pendants furnishes our answer. Take the pottery, for example. Approximately nine-tenths of the vessels and potsherds exemplify a class of earthenware which predominates on islands known to have been occupied by the Carib, and which we therefore believe is of Carib origin. And of the other tenth there is one pitcher probably of aboriginal

make but showing Spanish influence, and one vessel with a spout, the origin of which is obscure. Then there are a few pieces which may have been left by the peaceable Arawak people who, it is thought, were destroyed or absorbed by the invading Carib.

Some of the simpler ornaments of shell—beads and jinglers especially—also suggest Arawak styles, but may have been used by both peoples; other shell articles represent types found only on Carib islands. There are also a number of shell celts used as axe-heads or adze-blades which show careful workmanship, but whose origin is doubtful.

Taking the collection as a whole, Carib types predominate to such an extent that there is little doubt the ornaments of semi-precious stones were made by Carib people. Still, for the greater part, they were scattered about on the surface of cultivated lands and picked up by farm laborers, and in but few cases only were actually dug from the deposits of decaying shells and crab-claws intermixed with pottery fragments which constitute the kitchen-middens left by the ancient inhabitants. Therefore, in order to establish the facts, some experienced archeologist will have to make excavations on Montserrat and determine for certain whether the deposits yielding the pottery of Carib types actually contain also the beads and ornaments

of semi-precious stones, and, still more important, the raw materials and the unfinished examples.

M. R. HARRINGTON

A WOODEN CEREMONIAL SPADE FROM ICA, PERU

THE archeological riches of the province of Ica, Peru, have been known in recent years through the exploitation of ancient graves, chiefly in the Nasca valley, where thousands of beautiful polychrome vessels, wonderful examples of woolen textiles, and numerous objects of wood, all in a splendid state of preservation, have been brought to light. The Nasca ware has taken its place as the highest achievement of the old Peruvian potters, and the magnificent mantles, ponchos, and other woven articles are not excelled in any other culture area of ancient Peru. From Nasca, but especially from Pisco and Ica, many elaborately carved wooden staffs, spades, paddles, clubs, and other forms of artifacts of wood have been discovered. Some of the pieces are ornamented with coverings of thin plates of either gold or silver, while others bear traces of a decoration of a kind of red lacquer or of paint of other colors, such as white or blue, which has been inlaid in the cut-out part of the design. The carved designs, either incised on the

objects or in relief, nearly always represent birds, human figures, or geometrical patterns, but sometimes animal figures occur. No detailed study has yet been made of the various forms of wooden objects from the Pisco-Ica-Nasca culture area, and we also lack published illustrations of the numerous specimens preserved in the few museums fortunate enough to possess them.

Near Ica, Hrdlička saw in a private collection "twenty or more stout staffs with well-executed carvings at one extremity, and set in the ground in front of the house was a carved post showing an attempt at a representation of a human figure".1

The Museum has acquired an interesting specimen of a wooden ceremonial spade from this region, the gift of Mrs. Thea Heye. The object is illustrated in its entirety and in detail in the accompanying figures. This spade is four feet seven inches long. The top has a mushroom-shape knob surmounted by an aquatic bird whose long beak grasps a serrated object of conventional design, perhaps intended to represent a fish. Thirteen other aquatic birds are arranged one above another on one side of the cylindrical staff, and three similar birds are seated on the upper part of the base, two on one

¹ Hrdlička, Anthropological Work in Peru in 1913, with Notes on the Pathology of the Ancient Peruvians. *Smithsonian Miscellaneous Collections*, vol. 61, no. 18, p. 44, Washington, 1914.



Fig. 55.—The entire ceremonial spade from Ica, and the detail of its upper part.

(Length of the object, 4 feet 7 inches.)

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Fig. 56.—Detail of the blade portion of the ceremonial spade.

side of the rod and one on the other. Each of these birds grasps an object similar to the one on the top. The entire spade is further embellished with a series of carvings, those on the staff being geometric and stylistic designs, while those on the base, in three bands, are respectively animals with long tails, highly conventionalized birds, and a panel of diamond-shape patterns. It is evident that the base is incomplete, a considerable portion of the plain lower end having rotted away. Uhle has figured a specimen from Pueblo Nuevo, near Ica, which has a similar bird on a hemispherical knob at the top, with twelve inverted serrated projections on one side, but otherwise it is not carved.2

Farabee illustrates two analogous specimens, one with two birds facing each other on a mushroomshape knob at the top, with beaks grasping an object. The staff is plain, and on the top of the base are three small birds, two on one side of the rod and one on the other. The other specimen has four human figures on an openwork carved expansion on the top, and three birds on the upper part of the base, arranged two on one side and one on the other.3

358, 1913.

³ Farabee, Indian Tribes of Eastern Peru. Papers of the Peabody Museum of American Archaelogy and Ethnology, vol. x, pl. 26,

Cambridge, 1922.

² Uhle, Zur Chronologie der alten Culturen von Ica. Journal de la Société des Américanistes de Paris, N. s., tome x, fasc. 2, p.

It is probable that these elaborately carved objects were used ceremonially or ritually in connection with the digging of the graves of important persons, perhaps priests or caciques, and then placed in the graves with the deceased.

M. H. SAVILLE

DARIEN ETHNOLOGY

In February Mr. A. Hyatt Verrill went to the province of Darien, Panama, for the purpose of collecting material illustrating the ethnology of the little-known Indians of that region, with the result that the Museum has received a very complete collection gathered among the Teguala, Tupi-Towali, and Juarro tribes. Mr. Verrill's observations among these Indians has brought forth some illuminating facts. The Tupi-Towali are the River Towali, and should not be confused with the Towali of the San Blas Indians. The Cuna, Towali, Tupi-Towali, and Teguala are now all included in the Cuna-Cuna group, and with slight variations speak the same language. Originally, however, they were independent tribes, and even today some of the old people of the respective tribes converse in their distinct tongues, which cannot be understood by members of the other tribes of the group. The symbol of the Cuna-Cuna

is a four-pointed star, the points signifying the four confederated tribes and typifying originally the cardinal points of the compass—the Towali north, the Tupi-Towali east, the Cuna south, the Teguala west. At the present time the Teguala and the Tupi-Towali dwell about the headwaters of the rivers, although many members of these tribes, and those of the Cuna, have migrated to the islands and mixed with the Towali.

The Tupi-Towali are the largest in stature, the lightest in color, and by far the most intelligent of all the Cuna-Cuna tribes. Many of the men and most of the women are as light as a dark-skinned European, and their skin is tanned to a distinct reddish instead of brown. The younger children appear perfectly white, but the boys soon become darker from exposure to the tropical sun, while the girls remain light. Unlike the Teguala, whose women clip the hair short when they reach puberty, the Tupi wear it long throughout life. Their dress is unusual, with very distinctive patterns, and their face-painting is also different from that of the other tribes. Their woven headbands and other handicraft are almost identical with those of the Cuna.

Especially notable among the objects gathered are six head-ornaments, or crowns: one from the Juarro, two from the Teguala, and three from the

Tupi-Towali. So far as can be ascertained, those from the latter two tribes were the only ones owned



Fig. 57.—Feather head-dress of the Teguala.

(Height, 23 inches.)

by them. These ornaments, worn only by the medicine-men, consist of a circle, about five inches high, woven of strips of palm-leaves, at the outer base of which fits a rim of the same material, about which is tied a band of feathers. Five pompons made from sections of reed, with feathers attached by means of cotton cord. are placed equidistant about the crown and fastened with palmwood spikes, one end of each of which is thrust in the pith of one end of the pompon, the other in the palmleaf rim. Long plumes

are then stuck upright in the upper ends of the reeds (fig. 57).

The containers for these feather ornaments are also interesting. The smaller ones are kept in a

gourd, the cover of which consists of a section of another gourd that fits over the open end. This receptacle is placed in a carrier of coconut fiber. The longer plumes are preserved in a bamboo case. The two forms of container are shown in fig. 58.

Other crowns, made of forest flowers and worn by the Indians in their ceremonial dances, are unique. The use of the feather crowns, however, is confined to the medicine-men, or lele. When an Indian feels impelled to become a lele, he goes to the forest, where he "makes medicine" and



Fig. 58.—Feather containers of the Teguala.

(Length of the bamboo case, 2434

inches)

fasts for three days. If a bird should come close to him or alight upon him during this vigil, it is considered a sign of his mystical power, and thus he becomes a *lele* and entitled to wear a feather crown.

In woodcarving these Indians are highly efficient, their skill being shown not only in such utilitarian objects, of mahogany and other woods, as seats (many of which are carved in representation of animals), bowls, stirring paddles, floor smoothers, etc., but also in their fetishes carved from balsa, as well as of hardwood, in human and animal forms, the latter said to insure success in the hunt. Many of the separate human figures, as well as those carved on the ends of dance-wands, have a head-covering that bears a striking resemblance to a high hat, a style supposed to have been copied from the hat of some European whom the Indians had seen and to which they had taken a fancy. These fetishes, each with its distinct function, are used in treating disease, in aiding childbirth, and for other purposes, the figures acting as proxies for the medicine-men themselves. The household "gods," some of which are almost six feet in height, also have the capacity of "doctors," for they are believed to prevent sickness from entering the house. These, as well as the dance-sticks showing a bird perched on a man's head or on a

house, are believed to possess magic power and are borne by the medicine-men.

In the collection are also many figurines made of coarse clay in representation of animals of many kinds, as well as of human beings in canoes, seated on stools, etc. These probably were used as toys.

As a reward for doctoring several of the Indians, Mr. Verrill was presented with two sets of medicine paraphernalia, each contained in a basket. These outfits, so sacred to the Indians that no outsider must even see them, are supposed to be susceptible of curing all ills. The baskets contain a large variety of objects—upward of a hundred in each. The skulls of small animals and birds forming part of the paraphernalia are worn smooth by repeated rubbing on the bodies of patients.

Many cloth dresses worn by the women were obtained. The designs on these garments are heraldic, as are the totems of the women's families, hence it is probable that descent among these tribes is matrilineal.

A long blowgun from the Juarro is rather unusual, being distinct in form from the blowguns of the Teguala and the Tupi-Towali.

Other materials include basketry, pottery, fishing and hunting implements, canoes, and a great variety of bead and seed necklaces and breastplates, most of which ornaments bear pendants of innumer-

able objects ranging from coins to crab-claws. Altogether there are about a thousand ethnological objects from a group of tribes which heretofore have yielded little to scientific collecting.

Mr. Verrill plans next to go among the Terribi and Boorabi of Bocas del Toro province, Panama.

GEORGE G. HEYE

KWAKIUTL SWORD

The Museum has received, by gift from Mr. Harmon W. Hendricks, a fine example of old Kwakiutl sword, or warclub, unusual by reason of its length of twenty-nine inches, which perhaps is twice the average of such implements. Collected at Cape Scott, British Columbia, in 1863, the implement found its way to England, where it was recently procured. From its place of origin it is certain that it emanated from the Nakomgilisala, or Nawiti, tribe of Kwakiutl, which once lived on the northern side of Cape Scott, Vancouver island, but were removed to Hope island.

The implement is fashioned from a single piece of whale's bone, and of the shape shown in the illustration. It is of an average thickness of three-eighths of an inch at the back, while the edge has been worked down so sharply as to have made the weapon a formidable one in the hands of a

head-hunting Kwakiutl warrior. As a means of suspension, the handle is provided with a round aperture, three-quarters of an inch in diameter, surrounded by an incised line on each side.

By way of ornamentation, two heads and a lozenge-like figure have been incised in the side of the blade shown in the illustration, and three pieces of abalone-shell are inlaid, the largest piece drilled, evidently for suspension for an earlier purpose. The eyes of both of the heads are sunken deeply, and each is surrounded by an incised circle, while through one of the heads a relatively large hole has been drilled entirely through, but without relation to the decoration on the other side. On this latter side there are likewise two heads, one of them without eyes, but there is no abalone inlay.

Fortunately the Museum is in possession of an account of the circumstances attending the finding of this implement, which was recorded in the manuscript catalogue of Captain G. T. F. Pike of H. M. S. *Virago* (1900), and of his father, captain of H. M. S. *Devastation* on the Pacific station in 1860-63. The catalogue notes that—

"A bone sword was found by an Indian named La-gus at Cape Scott in the hollow of a tree, which probably accounts for its very old appearance, except on one side of the handle. The paint was



Fig. 59.— Kwakiutl

put on by the same man La-gus, whom I knew well, after I found it, and was removed by me. The reason why he painted it was that he wanted to use it at a ceremony of breaking a copper. After I bought it, he said he would make a wooden imitation of it, as although hard-up for money, he would be ashamed to let the other Indians know he had sold it."

From the fact that the sword bore a paper label dated 1863, it is evident that the above note was made by the elder Captain Pike. The following interesting account, however, was recorded by the son:

"The following story about the sword was told to me by Charley, an Indian I knew well, in June, 1901, and I wrote it down word for word.

"The original man, Que-ka-gila, who owned the sword, was the first of the Nahwitties, and lived at the bottom of the hill at Secretary Point, Hope Island.

"He was alone there and some of the men of other tribes tried to kill him, so he hid at the top of the hill. He and his wife and three daughters went up there, as he knew nobody else could climb

the hill. He made a house of hemlock branches. One morning they got up early, and while he was going down to his canoe he saw the Sisiutl¹ right before him and he tried to get over the Sisiutl but the Sisiutl would not get out of his way. So he tried to go another way, but he found a pool in his way. He got tired of walking so sat down beside the pool, and soon after the water moved. He looked at the water to see what was the matter, and he saw a totem-pole come out of the water and heard a voice behind him saying that he would be a chief if he took that totem-pole, but he would not take it. So the totem-pole went down, and then he saw a canoe with two men on it come out of the water, and heard the voice say he would be a great hunter if he took the canoe and the spear, but he would not take it. So the canoe went down. Then a little man came up carrying a stone chisel and a stone hammer; and he heard the voice saying that he would be a great canoe-maker if he would take the hammer and chisel, but he would not take them. And the man went down into the pool with the hammer and chisel, and the bone sword, kalo-th, came out of the water. He heard the voice saying again that if he would take it he would always be able to kill his enemies. And he took

[¹The sisiutl is the double-headed sea-serpent of Kwakiutl belief.]

the bone sword, and afterward he used to go about in a canoe and kill anybody he met with the bone sword, and when he had killed all his enemies he went down from the hill to find a place to live. His daughter married, and they all lived on Indian Island, Bull Harbour. And this was the origin of the Nahwitties."

The painting of the sword referred to by Captain Pike the younger, is still traceable, notwith-standing his attempt to remove it. Along the cutting edge and around the border of the handle are the traces of red; the part defined by the shallow groove parallel with the back of the blade was painted with alternate bands of white and green, and a band of green, with a trace of blue, bordered the red on the handle. On both sides of the blade, from handle to tip, paralleling the red on the edge, were two rather heavy lines in black which crossed the incised heads referred to, and there are further traces of black elsewhere on the sides.

F. W. Hodge

OLD ASSINIBOIN BUFFALO-DRIVE IN NORTH DAKOTA

While engaged in ethnological studies among the Arikara in the Red-bear neighborhood of North Dakota in August, 1923, I was informed of an old

buffalo-drive about four miles to the northward, on the scarp of the plain where it is broken by the gorge of a creek. My Arikara informants told me that according to their understanding this drive had been made and used by the Assiniboin long ago, even before they had obtained horses. The accompanying fig. 60, which is not drawn to scale but is intended as a diagram rather than as a map, will give an idea of the plan of the drive and of the nature of the topography.

The buffalo-drive is on the high plain on the north side of the Missouri river, twelve or fifteen miles east of Elbowoods, North Dakota. The plain is here broken by the gorge of a creek, which flows from northeast to southwest and then turns southward and discharges into the Missouri, four or five miles away. The plain slopes away to the south. The wings of the drive are laid along the scarp which overlooks the gorge of the creek to the north. The bed of the creek is miry, and probably two hundred feet below the level of the plain. The descent from the plain into the gorge is rather precipitous in places by steep gullies cut back into the scarp, and in places drops away over banks eight to fifteen feet in height.

The buffalo-drive was made by gathering bowlders from the prairie and piling them into cairns at a uniform distance of five paces apart for a dis-

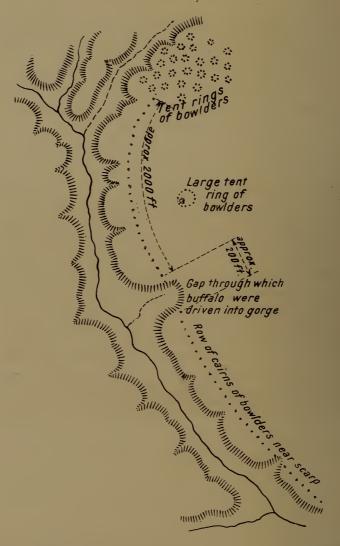


Fig. 60.—Plan of Assiniboin buffalo-drive on upper Missouri river, North Dakota.

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tance of about a mile and a half along the scarp of each side of a gap about two hundred feet wide which opens at the head of a gully leading into the creek gorge. By the nature of the topography this gully lies at the point of convergence of the



Fig. 61.—The steep and rocky sides of a valley over the scarp of which buffaloes were driven. The scarp stretches along the side at the left of the picture.

lines of the scarp, on one side trending away to the southeast, on the other to the southwest.

At the farther end of the line of cairns to the southeast, which we may call the right wing of the drive, is a number of tent circles, part of which are

indicated in the diagram. This was the camp of the hunting parties which resorted here periodically for the buffalo slaughter. The bowlders were for the purpose of holding down the bottom of the tipi-covers, hence the circles of bowlders indi-



Fig. 62.—A creek valley in the plain near the upper Missouri river, North Dakota. On the scarp is an old-time buffalodrive. Many drives and kills have been made here, as testified by quantities of bones in the valley.

cate the sites and the diameter of the tents. They are uniformly five paces in diameter. The camp-site is situated at the head of a coulee which leads down to the creek where the campers obtained their water at a point about half a mile above the

place of slaughter. Thus the Assiniboin, during the necessary time of detention at the camp preserving the meat and preparing the hides, were assured of a supply of good water, uncontaminated by the carrion resulting from the slaughter.

The situation of the camp was such, by the nature of the topography, that it not only was convenient to water, but was hidden from view of the herds approaching the drive from the prairie at the south.

At some distance west of the camp-site and at a point on the plain a little to the southeast of the gap in the drive, is a larger circle of bowlders, like the tipi-circles of the camp, but ten paces in diameter. Also there is within the circle, near the west or northwest side, a large bowlder. The arrangement would suggest that this might have been a larger tipi for holding ceremonies in preparation for the buffalo-drive, and that the larger bowlder might have served as an altar.

The left wing of the drive extends in a line of cairns away to the southwest for more than half a mile. The cairns throughout the extent of both wings are evenly spaced at a distance of five paces apart, and are heaped about two feet high. In operation a man was stationed behind each cairn, lying face downward under a spread buffalo-robe. In approaching the creek the herd would be successively veered off all along the line by the man

raising his arms and moving the edges of his robe; thus the herd was continually moved toward the gap. The cairns served to give some protection to the men behind them in case of a stampede.

As the herd came to the gap they were frightened, and hurried down the steep and uneven descent, stumbling and falling and trampling and crippling one another. Many of those which ultimately reached the stream at the bottom became helplessly bogged there, so the slayers were able to approach and kill the animals crippled in the descent or mired at the creek.

In fig. 61 the gully below the gap through which the herds were driven is the second at the left, just above the dark clump of trees with the white bank in the background. Glimpses of the water may be seen at bends of the stream in the right foreground and center background. Fig. 62 presents another view of the same stream.

The account which the Arikara give of this buffalo-drive is that it was there when they came into the country, and they suppose that it was made by the Assiniboin before they obtained possession of horses, while they occupied this region during their northward migration after separation from the Dakota.

After the acquirement of horses, which originally were brought into the country at the south by the

Spaniards and later taken northward through the Plains region, the use of buffalo-drives fell into disuse, for, with the aid of horses, the hunters were able to pursue the buffalo herds wherever they might be.

MELVIN R. GILMORE

COLLECTIONS FROM LABRADOR ESKIMO

PROBABLY as a result of their better equipment with metal tools, the Labrador Eskimo seem to stand forth as the most skilled workmen in ivory east of Alaska. Both Boas and Hawkes have noted this previously for the region. The collection of ivory carvings from Nachvak sound, northern Labrador, obtained through Dr. E. B. Delabarre, who was there in 1900 with the Brown-Harvard expedition, shows an excellent series of such articles. Besides the purely representative art objects there are four deserving of specific mention (fig. 63). These were ornaments of a magical protective character obtained from an Eskimo head-man encountered at Nachvak, whither he journeyed, as he said, for his health. He made his appearance at the Hudson's Bay post at Nachvak, then managed by Mr. Ford, and there parted with the fetishes. Dr. Delabarre's notes give the following information:

"In 1893 an old chief, Idualuk, came to Nachvak with a large band of retainers. He came originally from far north, either from Akpatok island or from Baffin Land. He set out traveling for his health, came down to Fort Chimo, passed the winter in the Cape Chidley region, and thence on to Nachvak, bringing with him a large quantity of furs as a

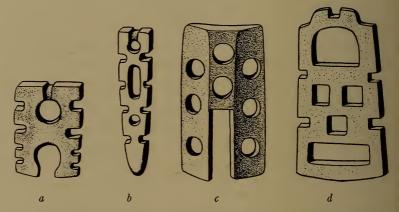


Fig. 63.—Ivory pendants worn as protective amulets by a shaman from northern Labrador.

(Height of c, $1\frac{3}{4}$ inch.)

result of his winter's work. He told Ford that many winters before there was a severe famine in his country, and they killed many of the women and children and ate them both raw and cooked. His own wife escaped to another tribe, and he was glad that she did, for otherwise he would have been obliged to kill her too. He was a medicine-man,

full of charms, of great power in his tribe. He gave Ford some of his charms, and Ford in turn

has given them to me."

The striking about thing these charms (fig. 63) is that they so much resemble the bone ornaments found abundantly in the Beothuk area of Newfoundland, figured by Howley.1 And again Boas has figured some from Baffin Land similar in form. It might seem that the figures have a symbolic value.

The costumes



Fig. 64.—Woman's boots of caribou-skin with seal-skin strips, from the Eskimo of Ungava, Labrador.

(Length, 3 feet 6 inches.)

and implements are typical of the northern Labrador group; they differ somewhat from those of the

¹The Beothucks or Red Indians, Cambridge, 1915, pl. xxv-xxix.

southern coast. The linear sewing on the woman's legging-boots (fig. 64) is remarkable. There



Fig. 65.—Woman's coat of caribouskin. Eskimo of Ungava, Labrador.

(Length, 6 feet.)

are twenty-two rows of narrow strips of sealskin reaching from the vamp to the waist-line, in all amounting to more than three hundred feet of stitching of the finest character.

A number of the stone, wood, and ivory articles were obtained from graves on the surface. Practically all of these are broken in some way to "kill" them in accordance with the widespread Eskimo belief. The small model of a stone lamp, and one of the steatite vessels, have each a

neat hole bored in the bottom. The lamps (fig. 66) from this territory conform to the type assigned

by Boas² to the northeastern region, where the divided wickedge appears.

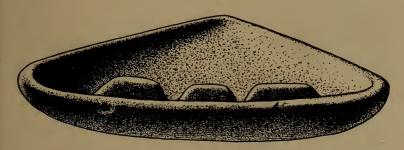


Fig. 66.—Steatite lamp from Nachvak, Labrador.
(Length, 11 inches.)

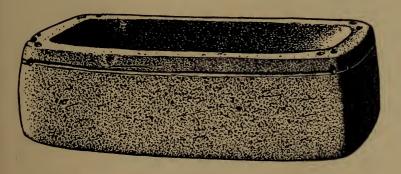


Fig. 67.—Steatite kettle from Nachvak, Labrador. (Length, 9 inches.)

The steatite kettles (fig. 67) of northern Labrador, which have straight sides, are regarded also by Boas (op. cit., p. 441) as typical of the islands

² Eskimo of Baffin Land, Bull. Amer. Mus. Nat. Hist., 1907, Pp. 439-441.

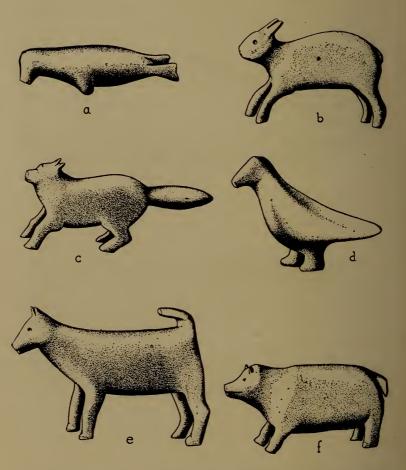


Fig. 68.—Ivory figures from Labrador Eskimo, representing (a) seal, (b) hare, (c, e) dogs, (d) bird, (f) bear.

(Actual size.)

north of Hudson bay. It would seem that the associated types of stone objects resembling each other in the northern Labrador and the Baffin Land and neighboring island regions are indicative of a culture diffusion.

While it has not been emphasized by other writers on Eskimo ethnology, I am inclined to regard the realistic ivory carvings of animals (fig. 68) as representations of spiritual guardians rather than as purely esthetic expressions. The prevalence of a religious feeling in connection with representative art among the far northern Indians, the Labrador Algonkians in particular, is my reason for assuming a similar concept to exist among the eastern Eskimo.



Fig. 69.— Wooden figure from a grave at Nachvak, Labrador.

(Height, $9\frac{1}{2}$ inches.)

FRANK G. SPECK

SHELL IMPLEMENT FROM FLORIDA

AN unusually fine specimen of a class of ancient implements made from entire conch-shells is here illustrated (fig. 70, 71). This was kindly presented to the Museum by Captain W. D. Collier of Marco, Florida, through the good offices of Mr. Clarence B. Moore. The implement possesses an unusual interest from the fact that it was found by Captain Collier at Key Marco in the muck deposit in which the late Frank Hamilton Cushing made his remarkable discovery of prehistoric masks and other objects of wood, and at the same time.

The material is the shell of a species of conch known as Fulgur perversum, which still may be found on the west coast of Florida. To make the implement, the Indians seem first to have pecked a hole in the top of the shell, above the shoulder, doubtless for the purpose of extracting the mollusc so that its meat might be used for food. Many if not most of the conch-shells not otherwise worked, found in the aboriginal shellheaps of the Florida coast, and even in the Antilles, have been so treated. This hole is the uppermost shown in fig. 70.

The next step seems to have been to peck a larger and more carefully shaped hole, seen below and to the right of the first in fig. 70; then a part of the



Fig. 70.—Shell implement from Florida.
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Fig. 71.—Another view of the shell implement: rom Florida.

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lip of the shell was pecked away and a notch made exactly opposite this second hole (fig. 71) in such a manner that a stick might be thrust through the shell from side to side to serve as a handle, passing to the left of the central core or columella of the shell.

Such hafted conch-shells seem to have served sometimes as hoes, sometimes as clubs, but the present specimen, judging by the curved, gouge-like edge ground at the tip of the beak, may have been intended as a woodworking tool of some kind.

M. R. HARRINGTON

ETHNOLOGICAL OBJECTS FROM SONORA AND SINALOA

MR. EDWARD H. Davis returned from Sonora and Sinaloa, Mexico, the middle of May, when he ended a trip that had for its object the collection of ethnological material among the Pimas Bajos at Onavas on the upper Rio Yaqui, the Yaqui near Potam on the same stream, and the Mayo in the vicinity of Masiaca and Navovaxia. Mr. Davis spent some time also on Tiburon island in the Gulf of California, where he gathered a comprehensive collection from the Seri Indians, numbering about 175 specimens. Added to the objects already pos-

sessed, the Museum now has an excellent array of material illustrating the material culture of the Seri tribe.

Among the most interesting specimens from the Seri is a series of pelican-skin blankets and capes, of which garments Mr. Davis obtained seventeen. Other important items are some wooden figures which, attached to necklaces of human hair, are used in religious rites. (See pages 223–224.)

Included in the objects procured from the Mayo are many masks used in their "Pharisee" dances, painted dance-wands, and rattles of various kinds. A number of looms, with partially finished blankets and belts, was also obtained. This collection of Mayo material numbers about 150 objects.

Among the more interesting articles from the Yaqui are skins of coyote, peccary, and ocelot, some of them decorated with feathers, used as back ornaments in dances. The fifty specimens obtained from the Yaqui include eleven pieces of pottery, one of which, a cooking-vessel, is noteworthy by reason of its thickness, the base averaging as much as an inch and a half.

A collection of forty-five pieces from the Lower Pima, or Pimas Bajos, shows what exceptional basketry is made by these people, the numerous wands of palm fiber being of extremely fine weave.

GEORGE G. HEYE

POTTERY FIGURINE OF ARCHAIC TYPE FROM SERILAND

A specimen of no little significance has been added to the Museum's collection from north-western Mexico. It is a small, crudely modeled, pottery figurine of a woman, corresponding in type

to the little figures found in the lowest stratum at Atcapotzalco, and also under the thick lava-beds of the Pedregal at San Angel, in the Valley of Mexico. The art of this early culture epoch has been called Archaic, and many of the pre-Columbian figurines of pottery from the region now occupied by the Tarascans in Michoacan, and from Jalisco, Colima, and Nayarit, seemingly belong to the same type.

The specimen in question (fig. 72)



Fig. 72.—Pottery figurine from Tiburon island.

(One-half size.)

was collected for the Museum by
Mr. E. H. Davis on the Island of Tiburon in
the Gulf of California, occupied today by the
Seri Indians, a tribe living until a short time
ago in a low state of barbarism. The rudely
modeled figurine, which in its present state is two
and five-eighth inches high, represents a pregnant
female, the torso decorated with incised zigzag

and parallel lines running lengthwise. As will be seen, the head is missing, and no arms are present unless the prominent protuberances close to the sides served the double purpose of arms and breasts. The constricted waist merges into dumpy broad hips, flattened below so that the figurine at rest bends backward at an angle of forty-five degrees. A slit in front is perhpas intended to indicate legs. The clay has been fired to a reddish-brown color and bears no trace of painting.

The late W J McGee, who conducted two expeditions to Seriland, in 1894 and 1895, writes concerning the Seri pottery as follows:

"While some three-fourths of the observed fictile ware of the Seri and a still larger proportion of the scattered sherds represent conventional ollas, there are a few erratic forms . . . In addition to the utensils a few fictile figurines were found. Most of these were crude or distorted animal effigies, and one (broken) was a rudely shaped and caricatured female figure some two inches high, with exaggerated breasts and pudenda. Analogy with neighboring tribes suggests that the very small vessels and figurines are fetishistic appurtenances to the manufacture of the pottery; e. g., that the fetish is molded at the same time as the olla, and is then burned with it, theoretically as an invocation against cracking or other injury, but

practically as a 'draw-piece' for testing the progress of the firing.'

McGee does not illustrate any of the animal effigies or the female figurine. This archaic type is undoubtedly an ethnological rather than an archeological specimen, and is significant in that it indicates the survival of archaic art among a Mexican tribe living until recent years in a state of practical isolation.

M. H. SAVILLE

ANCIENT COPPER ADZE FROM NEW YORK

One of the most unusual specimens in the Museum collection from the vicinity of New York is a neatly made copper adze-blade (fig. 73) which was found on Croton point, a promontory that extends far out into the Hudson near Ossining, about twenty-two miles north of New York City. This adze was picked up in a little vineyard near the old Teller house on the southern end of the point, twenty-five or thirty years ago, by Mr. William U. Underhill of Croton, at that time an enthusiastic collector of Indian objects. When Mr. Underhill first espied the specimen he took it for a celt- or hatchet-blade of stone, but on eagerly picking it up he was surprised to note that it was

very heavy in proportion to its size. Closer examination showed him that it was made of copper, a very rare thing to find near New York City. It was not white man's copper, either, but the pure native metal—not melted and cast, but beaten into form cold by Indian hands, very likely before Columbus was born. The adze measures almost exactly four and a half inches in length by two and three-eighths inches in maximum width, and a little more than half an inch thick. The edge is curved and quite flaring; from this the blade tapers to a blunt and somewhat battered point. One side is concave, almost gouge-like, the other distinctly convex, and the whole gives the impression of very careful workmanship.

Mr. Underhill always spoke of his specimen as a copper hatchet-blade, but the difference of its two sides—one concave, one convex—identifies it as an adze, doubtless once mounted crosswise in a wooden handle, the concave side toward the user, and employed for shaping dugout canoes, bowls, and other hollow articles of wood. For instance, in making a canoe, the Indian would pile red-hot coals on the log to be hollowed out, then carefully blow and tend them until they had lost their heat. Next he would brush them aside and chop out the resulting charcoal with his adze, then pour on more coals, and continue the process until his

canoe was finished, keeping the fire within bounds by dabs of clay.

An idea of the way the blade must have been

hafted may be gained from a copper adze, very similar in shape and still in its original handle, now in the Museum collections. which was found by Mr. Donald A. Cadzow of the Museum, in actual use among the Eskimo of Coronation gulf. The copper for the New York adze came in all probability from the ancient Indian copper mines on Lake Superior, where the metal occurs in pure nugget form, and ultimately reached Croton point after passing through many hands



Fig. 73.—Copper adze from New York.

(Length, $4\frac{1}{2}$ inches.)

as it was traded from one tribe to another. It may be that it was brought to Croton point by some up-river Indian and traded to the Kitchawank for

many yards of wampum, or perhaps a canoeload of dried oysters.

Western Long Island has yielded a small number of copper implements and ornaments, but these are of a somewhat different character, and were probably left by an earlier tribe of Indians whose very existence had been forgotten when the Kitchawank built their first wigwams on Croton point. Many implements and ornaments of copper are reported from northern and western New York state, some from Connecticut, and a few from central and western New Jersey.

M. R. HARRINGTON

EARLY ESKIMO OBJECTS

The hardships and adventures of the relief expeditions sent in search of Sir John Franklin, lost in the Arctic in 1845 while trying to discover a northwest passage, are vividly recalled by a collection of Eskimo weapons and clothing in the Museum, gathered by Mr. William Gowen, who was a member of the western expedition. These objects were procured by the Director while in London a few years ago. The western search expedition sailed in two barks, the *Enterprise* and the *Investigator*, in

¹ Beauchamp, Metallic Implements of the New York Indians, Bulletin 55, New York State Museum, p. 20 et seq.

January, 1850, in hope of finding the members of Franklin's ill-fated ship. The *Enterprise*, commanded by Capt. Richard Collinson, after passing through the Straits of Magellan, proceeded up the Pacific coast and arrived in Bering strait behind the *Investigator*, too late to pass the ice at Point Barrow. The *Investigator* had sailed past this point in July, while the water was still open, and penetrated as far east as Banks island, on the north side of which she was wrecked.

In the spring of 1851 the Enterprise sailed through Bering strait and along the north coast of Alaska and Canada, wintering at the southern end of Prince of Wales straits. In 1852, 1853, and 1854 the ship cruised through Dolphin Union strait into Coronation gulf, and as far east as Cape Colburne on Victoria island, on her hopeless quest, returning to England in 1855.

Mr. Gowen, according to Collinson's journal, sailed from England as an able seaman, was promoted to captain of the foretop, and returned from the voyage as captain of the maintop. As the Enterprise stopped at various Eskimo points on the Arctic coast, Mr. Gowen obtained the specimens referred to, which have a particular interest in that they are the oldest Eskimo ethnological objects in the Museum. The collection consists primarily of arrows tipped with ivory, bone, antler,

and copper, which, with a single exception, are almost identical with those obtained by the Museum's Arctic expedition in 1919 among the Copper Eskimo of Coronation gulf.

The exception noted is an arrow provided with a barbed antler foreshaft and with a chipped flint point, lashed with sinew into a notch on the distal end. This arrow is similar to one from Point Barrow illustrated by Mason. A seal-hole finder of the walking-stick type, and a seal spear with a copper-riveted toggle-head, procured by Mr. Gowen, closely resemble specimens in the Museum obtained from the Copper Eskimo. There is also a closely wrapped sinew-backed compound bow of a type anciently used by the Eskimo in the vicinity of Mackenzie delta.

Other specimens in the collection include several seal toggles, a three-pronged fish-spear, and a gut parka or shirt which might have come from any of the Eskimo on the Arctic coast.

D. A. CADZOW

TWO ARCHAIC ALGONKIAN JARS

It has long been known to archeologists that the Iroquois occupancy of the territory now comprised within the limits of the State of New York was preceded by a period of Algonkian occupancy

of unknown duration. The researches of the writer have led to the conclusion that this Algonkian territory extended far beyond the confines of New York, into Pennsylvania and across southern Ontario into Wisconsin, at least. In Ontario the Algonkian indications have hitherto been limited almost entirely to stone and copper implements, and potsherds, therefore it is of unusual interest that the Museum has been able to obtain an archaic Algonkian vessel from Canada. On the other hand, archaic vessels of the same type from the Middle Atlantic and New England states are so rare as to be considered prizes, even in the great collections of American artifacts, hence the Museum is again fortunate in the recent addition of another example of these receptacles to its already noteworthy collection.

The Canadian vessel (fig. '74), which is of typical pointed-bottom type, was found and restored by Dr. William L. Bryant, now Director of the museum of the Buffalo Society of Natural Sciences, at Fort Erie Grove, in Welland county, Ontario, not far from Buffalo, New York. The receptacle is fifteen and one-eighth inches high, and is well made of reddish-brown clay, slightly mottled by the firing. The tempering is apparently of burnt and pulverized stone, but the paste is of such consistency, and the jar is so well made, that neither

the material nor the method of manufacture is easily determined. The probability is that, like others of its type, this vessel was fashioned by the coiling process, but, if so, the coils were so skilfully blended as to leave no trace. The ornamenta-



Fig. 74.—Algonkian jar from Canada.

(Height, 15¹/₈ inches.)

tion consists of a broad band of oblique lines made by impressing the end of a cord-wrapped stick in the moist clay, and repeating the process until a line marked by a number of impressions was formed. The pattern extends over the rim and down

on the inside for about three-quarters of an inch, not an uncommon occurrence in Algonkian vessels.

The other vessel (fig. 75), which was found in a fragmentary condition by Mr. E. A. Gellott, and presented in memory of his daughter, Miss Louise



Fig. 75.—Algonkian jar from Aqueduct, New York City. (Height, 11 inches.)

A. Gellott, was found within the limits of New York City, at Aqueduct, in the Borough of Queens, a few miles east of Canarsie, Long Island. It stands eleven inches high, and is not so sharply pointed at the base as are several other examples in the Mu-

seum's series. A somewhat remarkable feature is a slight constriction about the jar a few inches below the rim, a detail usually lacking in local specimens. The lip does not flare outward, and the decoration extends downward from the mouth in a series of combined chevron and herringbone patterns about three inches deep, incised freehand, probably with a bone awl or a sliver of bone. This vessel gives ample evidence of having been built up by the coiling process, and is interesting in that it is tempered with coarsely pounded shell-probably of the oyster. The shell-tempering is still plainly visible on the rough inner surface, but the fragments have slaked from the outer face, leaving small, irregular cavities where they once were. In color the vessel is brown, prettily mottled with black. In form and ornament this jar is an excellent example of the older ware from Manhattan, Long Island, and Staten Island, with some resemblance to the handsomer ware of the same type occurring at Trenton, New Jersey, the ancient seat of the Unami division of the Delaware Indians. The vessel was no doubt manufactured by an Indian of the Canarsie, the westernmost of the Long Island tribes, whose archeology shows, on the whole, a closer affinity with the local tribes of Delaware origin.

ALANSON SKINNER

HOW A PUEBLO POTTER TREATED A BROKEN HANDLE

An unusual if not a unique vessel, by reason of its treatment in the process of manufacture, came



Fig. 76.—Ancient vessel from Arizona, showing how the broken handle was treated. The two arrows point to the stub-ends.

into the possession of the Museum a few months ago. The receptacle, of prehistoric black-and-white ware (fired, however, to reddish-brown and gray), from the Prospect ranch, twenty-five miles northeast of Saint Johns, Arizona, evidently

met with an accident which resulted in the loss of its handle before the vessel had been painted and fired. This is shown by the two stub-ends where the handle had joined the walls of the receptacle, over which the painted decoration was afterward carried. In providing pitchers and the like with handles, as in the present case, it was the custom for the potter to punch holes through the side of the otherwise finished vessel before the clay had dried, for the reception of the ends of the coil of plastic clay that formed this appendage, and then to finish the points of junction with the fingers and a gourd spatula. This process, of course, added greatly to the strength of the handle. In the case of the pitcher under discussion, the potter who modeled it evidently changed her mind after the handle had been broken off, and instead of providing a new one, smoothed off the stub-ends and painted and fired the vessel in the manner indicated and as shown in the illustration.

F. W. Hodge

OBJECTS FROM NEW YORK CITY

It is rather remarkable that at this late day Indian artifacts may still be found within the limits of New York City, yet in continuing his researches in local archeology, the writer has recently been

able to obtain a considerable number. The scene of investigation has been Staten Island, where, in spite of the fact that many of the best and most extensive Indian village and burial sites have been obliterated by building operations, arrowpoints, grooved axes, potsherds, and occasionally more unusual specimens may be found, thrown out by the shovels of workmen on house and factory foundations, and in the cutting and filling operations in making new streets.

Within the last month there have been obtained numerous arrowpoints and a celt, locally an uncommon article, from the streets and cellar excavations in Mariner's Harbor. From the wind-blown sand-hills at Watchogue, Chelsea, and Lakes island have come several fine grooved axes, a fragment of an unusual stone gorget, a piece of the bowl of a stone pipe, some beautifully chipped jasper drills and arrowpoints, a crude stone pestle, and several clay trade pipes. These pipes are of European manufacture, and form one of the signs that mark the period of transition from the self-supporting and self-sufficient life of the stone age to that of dependence on the whites for both necessaries and luxuries on the part of the local Indians.

The Lakes Island site has long been known in the literature of local archeology. The famous naturalist, Henry David Thoreau, once visited the

spot, and remarked in a letter to his sister, dated Staten Island, July 21st, 1843: "Last Sunday I walked over to Lake Island Farm . . . As I was coming away, I took my toll out of the soil in the shape of arrowheads, which after all may be the surest crop, certainly not affected by drought."

This place is now occupied largely by the buildings erected for a great garbage incinerator.

ALANSON SKINNER

RECENT ACCESSIONS BY GIFT

From Dr. T. B. Stewart: Eight photographs. From Mrs. Thea Heye:

Two Navaho blankets, one of them collected in 1874.

From Mrs. L. S. Burchard:

Shell bracelet; half a bone whistle; fragment of deerskin; end of a woven cotton belt; obsidian arrowpoint; two corncobs; a piece of twisted cord; strings of very small black stone and shell beads; strings from feather blankets; string of very small red and black stone, and shell beads; strings of very small red and black stone beads; lot of very small black stone beads; lot of shell beads; lot of fragments of strings on which beads were strung; lot of dark-red beads; pottery dipper; two pottery mugs; nineteen lantern-slides. Glen cañon, Colorado river, Utah. Collected in 1898 by Robert B. Stanton.

From Mr. A. M. Evans:

Catlinite pipe with snake and animal on bowl, and catlinite stem. Oglala Sioux.

From Mr. Louis C. G. Clarke: Twelve photographs.

From Lieut. G. T. Emmons:

Cotton mask. Nishka, Nass river, British Columbia.

From Mr. H. C. Thompson (in the name of his mother, Mrs.

Elizabeth Neill Thompson):

Spear-thrower carved to represent a totem-pole; basket; two oval basketry mats; oval basket and rattle cover; set of wooden knife, fork, and spoon; two wooden totems; wooden dish representing a bird; a model of a boat. Tlingit, Sitka, Alaska.

Beaded moccasin for child, beaded bag, and a woven hemp

bag. Warm Springs, Oregon.

Small beaded bag, and a toy baby-carrier. Shoshone, Wyoming.

Pair of toy snowshoes. Huron, Quebec, Canada.

Small beaded bag. Caughnawaga Mohawk, Quebec, Canada.

From Mr. Herman Schweizer:

Sacrificial cigarette of reed with native cotton wrapping. Cave in Camelback mountain, Phoenix, Arizona.

Four bone beads, two beads made from natural concretion, and a rectangular gray stone pendant. Agua Fria, near Santa Fe, New Mexico.

Miniature jar of corrugated gray ware, and two pyramidal medicine-stones. Holbrook, Arizona.

From Mr. James H. Moffitt:

Bone spearpoint. Yahgan, Patagonia.

From Miss Frances Dorrance:

Lithographic reproduction of "The Wyoming Valley on July 3rd, 1778." Photograph of Sturdevant map of the Wyoming and Lackawanna valleys prior to 1778. Copy of Kulp's *Historical Essays*.

From Mrs. George H. Pepper:

Toy pottery canteen. Hopi, Walpi, Arizona.

From Mr. Carl Schondorf:

Four wires and a drill for making wampum at Campbell's Wampum Factory, Pascack, New Jersey. String of shell wampum from Campbell's Wampum Factory. String of porcelain wampum made in Philadelphia and found in Campbell's homestead, Pascack, New Jersey.

From Mr. Arthur Woodward:

Three chipped points. Illinois. Two arrowpoints. San Diego county, California.

From Mrs. F. A. Westervelt:

Record stick, wooden club, and a piece of dried cactus stalk. Pima.

From Miss Mary E. Dissette:

Three terracotta heads. Teotihuacan, Mexico.

From Mr. Howard P. Bullis:

Twenty-nine arrowpoints, and a sinew stone. Canarsie, New York.

From Mrs. H. Bennett:

Three arrowpoints. Phillips estate, Teaneck, New Jersey.

From Mr. Daniel H. Campbell:

Two steel drills from Campbell's wampum-making machine at Pascack, New Jersey.

From Dr. Julio C. Salas:

Copy of Origenes Americanos, Lenguas Indianas Comparadas.

From Mr. J. Howard Nickerson:

Stone bowl. Red Cañon creek, Madison basin, near Yellowstone National Park, Wyoming.

From Mr. Everett Terhune:

Four baskets. Ramapo, New York.

From Mr. Howard M. Chapin: Potsherd. Iroquois.

From Mrs. Hicks Arnold:

Three jars; a wooden snake whistle; set of gambling sticks. Papago.

Jar. Maricopa.

Four jars; two bowls. Zuñi.

Jar; bowl. Isleta.

Two baskets. Apache.

Six baskets. Thompson River, Fraser river, Sliammon, Tulare, Hupa, Pomo.

Two horn spoons; carved slate war canoe; carved slate dish. Haida.

Four pottery tiles. Hopi. Three obsidian chips.

From Mr. Charles L. Smith:

Human skull from the Burton Mound site, Santa Barbara, California.

From Mr. Thomas F. Murphine:

Part of a human skull from the Burton Mound site, Santa Barbara, California.

From Mr. Edward Borein:

Human skull from San Miguel island, California.

NOTES

Mr. Wildschut commenced his field work of the season about the middle of May in Idaho, making headquarters at Pocatello, whence he visited the Fort Hall reservation, where are established the Shoshone and Bannock, to whom, in late years, the Lemhi have been added. Being closely related in language and having lived together for such a long period, the first two tribes have become so merged that scarcely any difference in their culture is now observable. The custom of burying all the personal belongings of the dead has greatly reduced the number of old obejcts among these people. Mr. Wildschut, however, was able to gather a comprehensive collection of basketry, although this is now practically a forgotten art, as only a couple of old women are familiar with the process and practise it. Of a total number of about three hundred specimens gathered on the Fort Hall reservation, half the number are baskets.

In the latter part of June Mr. Wildschut proceded to the Crow and Cheyenne reservations in Montana. The most important of the Crow specimens procured is a miniature war shield, made entirely of buffalo-skin, probably the only specimen of its kind ever obtained from this tribe. In early days the Crows often made such miniature

shields, in exact representation of their larger ones, which were believed to possess the same protective properties as the latter; but the miniatures were much more easily carried, hence frequently were taken to war in preference to the others. Noteworthy among all the specimens acquired is the last "white stand" regalia of the Women's Society of the Arapaho.

After leaving the Cheyenne, from whom a number of medicine bundles were obtained, Mr. Wildschut visited the Blackfeet, and expected to proceed later to the Bloods and Piegan in Alberta.

Mr. Foster H. Saville spent three weeks during the summer in excavating an ancient Montauk site at "Soak Hides," near Three Mile Harbor, Easthampton, Long Island, on the property of Mr. J. Thomas Gardiner, who courteously accorded permission for the Museum excavations. The work will be resumed in the autumn. Testing indicated the presence of about eighty pits, ranging in surface diameter from two feet to seven feet, in depth from two and one-half feet to five feet, and tapering to a rounded bottom in each of the nineteen pits that have been entirely exposed. In most instances the pits were filled largely with kitchen refuse, such as shells of various kinds, sturgeon scales, etc., and in each case artifacts were found-arrowpoints, netsinkers, bone awls, shaped hematite, potsherds, a

mortar and a pestle, and, most important of all, the largest as well as the smallest Algonkian vessels known. In four of the pits human interments had been made, one of them containing five skeletons, one two skeletons, and the others one each. As in the case of many of the researches of the Museum, this exploration was made possible by the generosity of Mr. James B. Ford. A part of the artifacts unearthed were deposited temporarily in Clinton Academy in connection with the celebration of the 275th anniversary of the founding of Easthampton.

Dr. Melvin R. Gilmore opened his summer's work in June among the Omaha and Winnebago of Nebraska, gathering among the former an individual sacred bundle, and among the latter a few specimens representing the old-time weaving of bags, the material being wool, but the patterns aboriginal. In the following month Dr. Gilmore proceeded to the Arikara in North Dakota, where he was joined by Mr. Coffin of the Museum for the purpose of making as full a photographic record as practicable. Dr. Gilmore succeeded in collecting a camp of about 250 Arikara people for the celebration of their ancient corn ceremonies, hence it was possible to make motion-pictures of the Sage Dance, the Holy Cedar Tree, and the Mother Corn ceremonies, as well as of a part of the Pirashkani ceremony, the hand game, and the old-time method

of cutting up beef—a representation of the ancient mode of butchering a buffalo. In the observation and recording of the ceremonies Dr. Gilmore had the valued assistance of Dr. H. B. Alexander of the University of Nebraska, Mr. Keene Abbott and Mr. George F. Will of Bismarck, all trained in ethnological work. At last report Dr. Gilmore had commenced to obtain from the celebrants of the ceremonies the texts of the rituals.

MR. Donald A. Cadzow spent three weeks of July in examining various Iroquois and Algonkian sites in Cayuga county, New York, the most interesting of which is a prehistoric Algonkian village and burial site on Frontenac island in Cayuga lake, near Union Springs. Here on the bed-rock, under several feet of kitchen refuse, were unearthed a number of burials. Among the more interesting artifacts recovered are plummet-shape stones, a small carved antler object resembling a deer's head, bannerstones, bone and antler harpoon points, antler cylinders, bone spoons, and a large bone tube. It is expected that Mr. Cadzow's exploration at this site will ultimately be resumed and carried to completion.

Prof. Marshall H. Saville represented the Museum at the Twenty-first International Congress of Americanists, in August, the first session being held at The Hague, Holland, the second at Göte-

borg, Sweden. Professor Saville was also one of the delegates designated to represent the United States, and held credentials also from Columbia University, the American Geographical Society, and the Explorers Club of New York. By virtue of having served as general secretary of the Thirteenth Congress, held at New York in 1902, he was the ranking member of the permanent council present, and was a vice-president at both sessions. Previous to the meeting of the Congress Professor Saville conducted studies in libraries and museums in London, Paris, Madrid, Seville, Barcelona, Rome, Florence, Zurich, Vienna, Berlin, Leiden, and Göteborg, receiving courteous and generous assistance from the authorities in charge, especially from Cardinal Ehrle at the Vatican Library. At the session of the Congress held at The Hague, Dr. Franz Heger of Vienna presented a paper on the rise and achievements of the Museum of the American Indian, Heye Foundation, based on its publications, concluding that it is now the foremost ethnographical museum of the world.

MR. DAVID E. HARROWER, who left New York on June 25 to gather ethnological collections in Nicaragua, reports that he has obtained interesting objects from an island near Bluefields, and that he was departing for a 200-mile canoe trip up the Wanks river.

MR. A. HYATT VERRILL, who has completed his collecting in Panama for the present, has obtained representative collections from the Boorabi, the Terribi or Shayshan, and the Cocle Indians. The wooden carvings and feather head-dresses in the collections are most noteworthy, as are also the complete dance costumes made of palm-bark, with painted decoration. Mr. Verrill has departed for Chile, where he will collect ethnologic material until December, when he will return to Central America in the interest of the Museum.

Professor Saville and Mr. Hodge have been elected membres titulaires of the Société des Américanistes de Paris, and have also been appointed members of the Committee on State Archeological Surveys of the Division of Anthropology and Psychology of the National Research Council.

In the Tijdschrift van het Kon. Nederlandsch Aardrijkskundig Genootschap (2e Ser. dl. XLI, Leiden, 1924, Afl. 3) Dr. H. ten Kate has published an article on "De Hendricks-Hodge-Expeditie" of the Museum and reviews the papers on the results of the expedition that have been issued thus far.

THE MUSEUM has been honored by the appointment of Prof. Marshall H. Saville, by the Department of State, as one of the ten delegates designated to represent the United States at the Third Pan

American Scientific Congress to be held at Lima, Peru, from December 20, 1924, to January 4, 1925.

A RECENT visitor to the Museum was Dr. E. Roquette-Pinto, Curator of the Ethnographical section of the Museu Nacional of Rio de Janeiro. Dr. Roquette-Pinto is well known for his ethnological work among the aborigines of Rondonia.

In Scientific Monthly for July appears an article by Mr. Hodge under the caption "Skidding on the Road to Science," in which he accounts for the alleged occurrence of some terracotta heads from Teotihuacan, Mexico, in a block of adobe that was said to have formed the "corner stone" of the old Franciscan church at Zuñi, New Mexico.

A POPULAR illustrated account of some of his experiences and observations at the Hawikuh ruin in New Mexico, by Mr. Cadzow, is published in *Travel* for October.



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